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University of California, Davis University Library
Oral History Program

# BEN A. MADSON
## Pioneer in Agricultural Education

With a Foreword by
J. R. Blanchard

An interview conducted by
A. I. Dickman

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302 G STREET, DAVIS, CALIFORNIA 95616 PHONE 756-0800 MONDAY, JANUARY 14, 1974

# Ex-mayor Madson dies

Ben A. Madson, professor emeritus of agronomy and one-time mayor of Davis, died Saturday at Davis Community Hospital. He was 86.

Flags were lowered today on campus and at City Hall in memoriam.

Madson was chairman of the agronomy department for 22 years (1926-48) and director of the statewide network of agricultural field stations for six years (1948-54) before his retirement.

He lived at 551 Scripps Drive.

Madson, a native of Iowa and 1907 chemistry graduate of Iowa State College, was a member of the Davis City Council from 1939-47 and again 1957-60. He was mayor in 1947-48 and later became city treasurer.

In 1952 he was named Davis Citizen of the Year and in 1955 was elected president of the Davis Area Chamber of Commerce.

Joining the University of California faculty in 1910, Madison began teaching on the Davis campus in 1914. He was named an assistant professor in 1918, an associate professor in 1926, and a full professor in 1934.

He did a semester of graduate work in soils at the University of Illinois and in 1924 took a one-year sabbatical to the University of Chicago for work in plant physiology.

Madson estimated that he taught 10,000 students during his career at the university.

He was also the author of more than 60 scientific papers, the most important a study of field crops species, both native and domestic. It was this report which led to his appointment in 1948 as field station director.

Madson was a member of the American Society of Range Management and the Society of Plant

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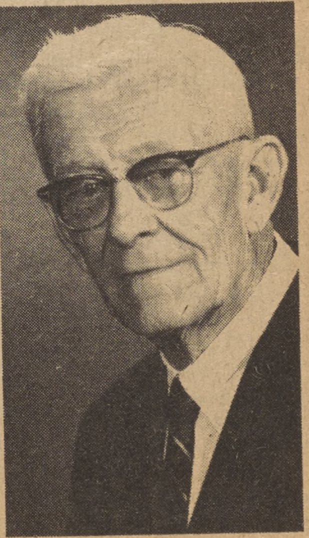

Ben Madson

Neenah Bond
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Ben A. Madson, 1951, California Monthly cover photo

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## FOREWORD

It became evident some years ago that we should develop at Davis an oral history program that would help illuminate the history of agriculture in California and of the Davis campus itself. Some of the pioneers in this development were still on the scene, although many had passed along, it seemed imperative that their memoirs should be obtained before it was too late. Such a program was planned in the early 1960's. It languished, however, because of lack of staff and funds, although a very brief oral reminiscence of John Rogers, first foreman of the University Farm and long-time supervisor of Yolo County, was obtained and transcribed by Don Kunitz and me. Written diaries concerning the history of the Davis campus were also obtained from Professor Fred Griffin who was closely associated with the two-year curriculum for many years and from Professor Edwin Voorhies, an early student at Davis, and later an influential professor and administrator at both Berkeley and Davis. Professor Tracy Storer also wrote a detailed and meticulous history of the Zoology department at Davis. These and related items are now available in the University Archives.

Outside of these efforts, very little was done. Fortuitiously, A. I. (Dick) Dickman arrived on the scene in 1971. He had previously become interested in the University while serving as President of Library Associates at UCD in 1970. Retiring after a long and successful career as an insurance executive--his last position was that of Manager of the Equitable Life Assurance Society in Sacramento--he was eager to assist the University on a volunteer basis and was particularly enthusiastic about helping with our quiescent oral history project.

This oral history of Professor Ben Madson represents Mr. Dickman's first effort and is also the first publicly produced product of the Davis oral history program. It is particularly fitting that Professor Madson's oral history is the first to be issued, as he and his colleagues epitomize so well the leading role of the Davis campus in the improvement of agriculture in California. We owe particular thanks to Professor Merton Love and other long time colleagues of Professor Madson who assisted Mr. Dickman in this endeavor and who added additional sidelights.

Another important oral history about the pioneering viticultural work of Professor Albert Winkler, the second in the series, is now being prepared by Mrs. Joann Larkey whose expertise and interest in local and oral history has already been amply demonstrated through her book, Davisville '68, The History and Heritage of the City of Davis (1969). Mrs. Larkey has prepared Mr. Winkler's oral history in collaboration with Mrs. Willa Baum, Director of Bancroft Library's oral history program. We are very grateful to Mrs. Baum and her colleagues who have been of such great assistance and who have encouraged us to proceed.

In a sense, oral history was initiated by the founder of the Bancroft Library, Hubert Howe Bancroft, who, through a corps of interviewers, utilized oral history as a technique to obtain reminiscences of California pioneers and leaders. This program, being continued vigorously with the use of modern techniques under the leadership of Mrs. Baum and Dr. James Hart, Director of the Bancroft Library, has been the chief model of the Davis project. Hopefully, the Davis program will add additional useful information on the history of California to the large store already accumulated by the Bancroft Library.

Mr. Dickman is now actively interviewing former Chancellor Emil Mrak and Dean Roy Bainer of the College of Engineering. Mrs. Larkey is preparing an oral history of the Power family of the Nut Tree under a contract agreement. Additional oral histories of persons prominent in the history of agriculture, the Davis campus, the Sacramento Valley and related subjects will be prepared. We hope through these efforts to preserve some of our priceless heritage. The assistance of additional volunteer workers will be very welcome.

J. Richard Blanchard
University Librarian
June, 1972

## INTERVIEWER'S PREFACE

As a novice interviewer I went to Berkeley to learn more about the techniques involved, and spent a valuable morning with Mrs. Willa K. Baum, Director of the Regional Oral History Office, whom I have called on for advice and guidance many times since. She is always a reservoir of knowledge which is made available with kind understanding. Mrs. Baum also agreed to allow us to employ her own skilled staff of transcribers.

The oral history office at Davis was placed in the library's Department of Special Collections where Donald Kunitz, the Department Head, and his staff have provided help and encouragement in abundant measure.

Donald C. Swain, Professor of History and Vice Chancellor, Academic Affairs, UCD, whose oral history interest is noted in his article on the subject published in the American Archivist, (January, 1965) has given the program his encouragement.

Mr. Blanchard suggested that Professor Ben Madson be the first to be interviewed since he was the senior member of the Davis faculty and had been an important innovator in the Department of Agronomy (currently, Department of Agronomy and Range Science) which is considered to be at the very heart of the College of Agriculture.

After Professor Madson agreed, the first of four taped interviews was held in mid-October, 1971. The other interviews followed on an afternoon each week for the next three weeks. The interviews took place in the living room of his home on B street in Davis where he has lived since he had the house built in 1928. He lives alone since the death of his second wife several years ago.

Madson is a tall man who puffs on an ever present pipe, a habit which may have contributed to his chronic cough. He doesn't look his eighty-five years and still plays golf several days a week at the nearby El Macero Country Club.

Madson began his academic career in Berkeley in 1910, moved to Davis four years later, and was appointed chairman of the Department of Agronomy in 1927. He revamped many of the courses then offered. Up to that time, the courses in cereals and forage and field crops had been taught from an empirical point of view, were repetitive, and did not deal sufficiently with scientific principles. As his memoirs relate, his ideas for change received the support of the Dean of the College of Agriculture, Claude B. Hutchison, who urged him to develop new courses for the approaching fall term of 1928.

- A. I. Dickman.

[Series of interviews conducted by A. I. Dickman with Professor Ben Madson, Davis, California, October, 1971.]

A.I.D.: Will you describe where we are, and maybe something about when you built your house and so on.

Madson: I moved back to Davis in '25. I'd just come back from sabbatical without any money, but I did buy these three lots in I think about '27. Then the next fall--the fall of '28--I had this house built. I remember I moved in here on January 1, '29, and have lived here ever since.

A.I.D.: We're in the living room, and it's a very comfortable place. Your general health is good?

Madson: It has been, yes. I've had my ups and downs, but right now I have some bronchial trouble. The doctor says it's because I smoke too darned much. (Laughter)

A.I.D.: Maybe when you reach your hundredth birthday you'll quit.

Madson: I doubt whether I'll ever reach it. I don't think it makes too much difference.

A.I.D.: Would you say that your memory is about as good as it ever has been?

Madson: Well, no, I wouldn't say that it's as good, but I still remember a lot of things. But sometimes I'm a little lost on chronology.

A.I.D.: Do you have any pictures of yourself when you were a youngster or any pictures of the family?

Madson: I have some odds and ends around. I don't have any of myself. In fact, I understand I was fifteen years old before I even had a picture taken.

A.I.D.: Professor Madson, when were you born?

Madson: March 19th, 1887, and I don't remember much of that period, because we moved up to Kossuth County in Iowa, and I was still quite a youngster.

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| | I don't remember exact things. When we moved up there we lived on a farm, until about 1902, at which time my father became very ill and wasn't able to farm anymore, and then my family moved to Ames, where the kids went to college. We moved there in 1902 and they lived there most of their active lives. |
| A.I.D.: | Was it a big farm? |
| Madson: | No, it was 160 acres--an average size farm in Iowa. I remember when they moved up there it was just a raw piece of land. They had to start from scratch. My folks came from Denmark--in fact, my three older sisters were born in Denmark. I think they came over here about 1884 or '85. I don't remember the exact date. |
| A.I.D.: | How many of you were born here? You were born here-- |
| Madson: | I was born here and three of my sisters were born here. |
| A.I.D.: | You were the only boy? |
| Madson: | Yes. I did have one brother, but he died as an infant, so I was the only boy who grew up in a family of six girls. |
| A.I.D.: | Did you get a little spoiled? |
| Madson: | No, I'm afraid not--it would be the other way. |
| A.I.D.: | Nobody to do the chores except you? |
| Madson: | Well, the girls helped quite a little--we all had to get in and work. But I always had to drive the girls to church on Sundays, which was three miles, and help out in some other ways with some of their problems. I expect they helped me with some of mine, also--it was probably reciprocal. |
| A.I.D.: | Were you close to your sisters? |
| Madson: | Oh yes, quite. |
| A.I.D.: | Are they living now, most of them? |
| Madson: | No, three of them are living and three have passed away. |

A.I.D.: Tell me a little about what it was like to be a farm boy in those days--what your chores were--did you get paid for it and that kind of thing.

Madson: No, we never thought of having allowances in those days, or vacations, or anything like that. We all worked and we ran a general farm, and had some dairy cows and hogs and other things. I remember one of my main jobs from the time I was ten was having to take the milk to the creamery every morning. It was a drive of about three miles. I had to do that and then get back and walk about a mile to the country school when school was in session. My main job was to get up in the morning and curry the horses and feed and harness them.

Then, of course, in the off season we all worked. I think I started driving a team as a farm worker when I was about nine or ten. We were just accustomed to work. We seemed to be able to develop our own recreation pretty much. We didn't have to have hired directors of recreation as we do now. Even for the older people it seems we have to have them now.

A.I.D.: (Laughter) Or television, either.

Madson: No, we didn't have any of those things.

A.I.D.: What did you do for recreation?

Madson: Well, that's hard to say. We always had games of some kind. There were neighbors' boys and we played a little ball, not very much. Oh, just general things the kids could find to do.

A.I.D.: Were you pretty athletic?

Madson: No, I never was.

A.I.D.: I'd like to ask you about the school you went to: it was about a mile away from the farm?

Madson: Yes, it was a country school--a one teacher school--and the attendance varied from just a few to about twenty or twenty-five. A lot of them went to school in the winter time and worked in the summer time. We didn't have compulsory school in those days.

A.I.D.: How many grades did you complete in that school?

Madson: Well, since we didn't designate grades I don't know; we just went to school and progressed from one subject to another.

A.I.D.: Do you remember any of the subjects that you took? The traditional ones?

Madson: Oh yes. We took English and we took arithmetic, geography, and history. I think it was pretty general. I only went there 'til about 1902, I was only about fourteen or fifteen when we moved to Ames. Then, instead of going to high school, which I probably should have done, I entered the college there and took the preparatory course--which they had at Ames at that time. It was just for people like me who hadn't gone to high school. Then I went on through college there.

A.I.D.: In other words, you had eight years in the country grade school. Did you have the same teacher most of the time?

Madson: Oh no, they changed quite often.

A.I.D.: Did the teacher board around with the families?

Madson: Sometimes, and sometimes they were local and drove home to wherever they lived.

A.I.D.: And then when you went to Ames you were fourteen or fifteen, and you took this preparatory course. What was that?

Madson: Of course you took the subjects primarily that you would have had in high school to prepare you for college, and that included particularly more work in English and in history and in algebra and things of that kind.

A.I.D.: How long did it take?

Madson: I went the one year and just went on with the college courses; even in the prep year I did take one or two strictly college courses. So, they just integrated and didn't make them separate.

A.I.D.: Was one year typical? Is that what it took the average--

Madson: That was typical, yes.

A.I.D.: Now, were there any entrance exams of any kind when you went to college?

Madson: No, none whatsoever.

A.I.D.: When did you start thinking about college? What caused you to think about it?

Madson: Frankly, my mother did the thinking in that line for the family, and she'd made up her mind she wanted the kids to have an education. That's why they moved to Ames. As a matter of fact they ran a boardinghouse there for quite a good many years. So, we stayed at home. I probably hadn't even thought about college up to that time. That was what she wanted us to do--she and my father both, of course, so we did, and without any particular thought on my part.

A.I.D.: Had your older sisters gone to college?

Madson: The oldest sister didn't. She got married in 1898, but all of the other sisters went to college--most of them to Ames.

A.I.D.: So your folks thought a college education was important whether you were a boy or a girl.

Madson: Yes.

A.I.D.: Why? Wasn't this a little unusual for that time and place?

Madson: I expect it was, but Mother always insisted that she wanted the kids to have a good education.

A.I.D.: Was she college, herself?

Madson: No neither one of them was. See, they came from Denmark and three of my sisters were born in Denmark. No, they were just hard working people, but Mother read incessantly, and she was particularly interested in agriculture. Of course they were farmers, but she loved plants and flowers and things. So she was a voracious reader, especially in those fields.

A.I.D.: What did your father do when he gave up the farm and moved to Ames?

Madson: He and Mother ran the boarding house.

A.I.D.: Do you think it was a sacrifice for your Dad to give up farming to run a boarding house--and he did this so you kids could get a college education, didn't he?

Madson: That was one reason, but one of the reasons he gave up farming was that he became very ill and really couldn't work very hard, and so they decided that they should try and do something else that didn't take as much effort as farming. In fact, the last year we lived on the farm (I was only about fourteen) I and one hired man for three months during the summer did most of the work on that farm. The girls helped to do the milking, and so forth. No, the real reason for moving was his health.

A.I.D.: Did you have chores in connection with the rooming house?

Madson: Oh yes, we all had to help. My main chore was helping keep the yard in shape and things like that. And then, while going to college I worked part time when I could--at fifteen cents an hour.

A.I.D.: (Laughter) What did you do?

Madson: I worked on the college farm at whatever there was to do--built fences and pulled weeds and did various and sundry things--did whatever I could find to do. One winter I milked cows both night and morning. Had to walk about a mile to the cow barn--pretty cold at times.

A.I.D.: Your family--were they devout people? Did they go to church?

Madson: Quite, yes. When we lived on the farm, we went to the Methodist church, mostly, which was in a little town about three miles away. Every Sunday we had to drive to church. When we moved to Ames, we kind of got out of the routine. Although they went to church quite regularly, I don't think Mother and Father went as much as they did when we were on the farm. Of course, running the boarding house--that was a seven day job, so they didn't have a lot of time.

A.I.D.: What was the politics of your dad?

Madson: Democrat. I don't know why, but he was.

A.I.D.: Was that unusual in Iowa, to be a Democrat?

Madson: I don't know that it was then so much as it is now. (Laughter)

A.I.D.: How far away from the campus did you live?

Madson: Oh, we just lived off the campus a few blocks.

A.I.D.: Did your sisters marry men who were in the field of agriculture?

Madson: My oldest sister got married in '98 and she did marry a farmer. Then, my next oldest sister married just after she graduated from Ames, and her husband had also graduated from Ames and was in the dairy industry, and he was involved in that. In fact, for a number of years, he was the head of the dairy department at Amherst, and prior to that he had been in Idaho as the head of the dairy department. That was in the early '20's. Then he moved to Amherst along about the middle '20's.

My next oldest sister never got married. She taught school all her life and is still living in Lincoln, Nebraska, where she taught at Lincoln High School.

My next oldest sister--the one just older than I was--she married a school teacher whose home was in Washington, I think it was. But she died in childbirth.

My two younger sisters, they didn't marry into agriculture. One of them married an engineer and the other a sociologist.

A.I.D.: What was the size of the student body at Iowa State?

Madson: I think when I went there it was around seven hundred.

A.I.D.: Let's get the dates in. Let's see. You started there in--

Madson: I started there in the winter of 1902 and I graduated in 1907. I was really out one semester because I was sick--got sick in the middle of the semester and didn't finish most of the work. In fact, I had an operation for appendicitis in the winter of 1906, and I'd been sick for quite a while, so I had to drop a lot of the work. Otherwise, I should have graduated in 1906. But I don't think the extra year did me any harm. I took a lot of courses that I was interested in.

A.I.D.: Mostly chemistry?

Madson: Chemistry and some others.

A.I.D.: And what course did you enroll in?

Madson: I enrolled in agriculture because they didn't have any division as they do now into animal husbandry or agronomy or horticulture. It was just agriculture. We all took the same general courses. Animal husbandry was one of the most popular courses at that time. Then, about the last year I was in college they did set up separate departments of animal husbandry and agronomy and horticulture--I think they were the main three. As I remember, now. And most of us decided then to finish in animal husbandry--those of us who were getting into our senior year. That's where we'd been heading pretty much. Most of the emphasis was on animal husbandry. When I started in, there was no specialization, just agriculture.

Then, when I was going to college, the course I liked particularly was chemistry. So, I took all the chemistry I could get in addition to that which was required. I guess that was because I liked the instructor pretty well, too. But it was interesting and I liked chemistry, so in addition to the regular courses, most of my electives were in chemistry.

A.I.D.: Do you recall the names of any of your teachers?

Madson: Yes.

A.I.D.: You said you liked this chemistry teacher.

Madson: Yes, the teacher I had--well, of course I had several of them--but the one I liked particularly was a teacher by the name of Coover. He just came from Oberlin. I guess he came about the time I started chemistry. He was an interesting chap and--I felt--more helpful than any other teacher I'd ever had. He was just out of college himself.

A.I.D.: How about your classmates? Any of them that you remember particularly?

Madson: Oh, there were quite a few of them. Of course, most of them have passed away now. One of them, Edgar Stanton who was an engineer, he used to live up here at Gridley. He died here a few years ago. His father was one of the deans there in college. Another classmate of mine--also in animal husbandry--Ed Wentworth became quite active in livestock circles one way or another. He also passed away a short time ago. Then, there were several of them along the way--most of them went into agriculture.

A.I.D.: Was there any stigma in those days to agriculture when you went there as a student?

Madson: I don't think so.

A.I.D.: The engineers got along fine with the aggies?

Madson: I think so.

A.I.D.: They never called it a cow college?

Madson: Oh yes, that was quite common. It was the same as Davis used to be.

A.I.D.: Or Penn State, when I went to school. Were there fraternities in those days?

Madson: Well, they were just starting--at Ames at least. There were fraternities at the universities. We had a few at Ames there the last few years I was there. I know there was quite a little argument when they started as to whether they should have fraternities or not, but they finally arrived. I didn't belong to any of them. In fact, I was not very active either socially or involved in general activities.

A.I.D.: Is Iowa State a land grant college?

Madson: Yes.

A.I.D.: And there was also University of Iowa at the same time?

Madson: Yes, that's right. That was at Iowa City.

A.I.D.: Did Iowa State College compare academically with the University of Iowa then?

Madson: Yes, I think so. At the time, most of the engineering was at Iowa State and not the University. The University had all of the medical school and law school and L & S. The engineering and the agriculture were pretty much concentrated at Ames at the time. Now, of course, that's all changed. Both institutions have broadened out.

A.I.D.: But at that time they were two separate, individual institutions, which is different than when you got here and you found Cal and Agriculture was all part of the University. In your opinion, is it better that Agriculture be part of a great university than a separate school?

Madson: I think so, very much.

A.I.D.: Why do you say that?

Madson: Well, because I think it gives the agricultural students a better chance to broaden their education than if they're just at a school where agriculture is emphasized. We have about that situation in some of our state colleges, like San Luis Obispo, and schools like that. I feel very strongly that you're much better off in a university where you have the opportunity for contact with other disciplines that you wouldn't have in a strictly agricultural college.

That, I think, has been the main reason why all of our land grant colleges now are state universities.

A.I.D.: OK, so now you're getting out of Ames, or you're a senior and you're thinking about getting a job?

Madson: Yes.

A.I.D.: Did you consider farming as a career?

Madson: Yes, but of course I'd have had to have gotten a job on a farm because I didn't have any money. Most of us didn't at that time, and it became a matter primarily of where could I get a job? Well, nothing particularly interesting showed up in agriculture, and having had a lot of chemistry and experience in chemistry, I happened to get this one out here which just came along when I needed a job. I did have an offer, too, from Louisiana, teaching agriculture in a parochial school, but that didn't appeal to me very much. So I came out here instead.

A.I.D.: Did you have many job offers?

Madson: Not particularly. When I got out of college--I'd worked there some during the last year, I worked as a chemist at the experiment station laboratory--when I got out of college I continued on in that capacity for a couple of years. I did take time out for short periods to be control chemist in a sugar factory at Waverley, Iowa. That was the fall of '08 and '09. Then in 1910, I went to Illinois for one semester. I wanted to get some more work in soil chemistry, particularly, and the University of Illinois had quite a reputation about that time as being a good place to get work in soils. So I went there in the spring of 1910 and then came back home and came out here--got a job out here in August 1910.

A.I.D.: This postgraduate work that you did. Had you thought that you might keep right on and get a postgraduate degree?

Madson: No, I never did.

A.I.D.: What was the thinking about getting your Ph.D. in those days?

Madson: Well, there wasn't much sentiment for it. In fact, I remember the only professors I knew here at Davis who had a doctor's degree had got it in Germany. I don't believe Ames gave a doctor's degree--I never heard of it. But the pressure on the advanced degrees was nothing compared to what it is now. Now, it's pretty near union card if you want to get into a university.

A.I.D.: Can you remember the details then--first of all, do you remember why you left the Iowa Agricultural Experiment Station and soil chemistry you were interested in to come to Berkeley?

Madson: I expect because it was, oh, more or less, a routine job, and not much future in it anyway. And I thought I'd better get away from home and get a job somewhere else. So, I had feelers out and this was the one I got. I really came out here as an analyst--a technician with the agronomy department. I just worked through the various chairs (as you might say) since then.

A.I.D.: What was your salary?

Madson: A thousand dollars a year.

A.I.D.: What was it in the Experiment Station?

Madson: Oh, I think it was about seven hundred or seven fifty.

A.I.D.: So, it was a little raise?

Madson: It was mostly on an hourly basis there. At that time they were paying fifteen or twenty cents an hour.

A.I.D.: Who actually recruited you?

Madson: George W. Shaw, Head of Experimental Agronomy Division at Berkeley.

A.I.D.: These feelers that you sent out--how did the actual event take place?

Madson: Well, I don't know just how I did get in contact with California, but mostly through my instructors who had known I was looking for a job--and what kind of a job.

Madson: If they heard of something they would let me know, and so on. In fact, when I came out here, I had the choice of two other jobs. One was in Louisiana as a teacher of agriculture in one of their parish schools down there, and the other one was herdsman for a large hog raiser in Northern Iowa, which didn't pay too much although you got your room and board.

As I say, I like chemistry, so I had this opportunity to come out here and I decided on this.

A.I.D.: This was 1910, about three years after you'd graduated--you kept in touch with those instructors?

Madson: Yes, because I worked there at Ames, and I really believe now that the one who put me in touch with this was one of my instructors at the University of Illinois. I'm not quite positive how I did get in touch--I was there in the spring of 1910, and I guess I told him I was going to be looking for a job. I think he was the one who put me in touch with Berkeley.

A.I.D.: Did they ask you to come out and have a look at California first?

Madson: No.

A.I.D.: Did they pay your expenses out?

Madson: No.

A.I.D.: How did you make the trip from Iowa out here?

Madson: By train--in the coach--chair car.

A.I.D.: How long did it take, do you remember?

Madson: Oh, I think it took most of three days and two nights. Had good train service in those days.

A.I.D.: You were single then?

Madson: Yes.

A.I.D.: You said that when you came out here it was really as a technician. How long did you work as a technician?

Madson: I worked at that not all exclusively for three years. I was still in the Agronomy Department, but in the meantime I had been inveigled into doing some of the teaching and just gradually worked away from it.

A.I.D.: Who inveigled you into teaching?

Madson: The head of the department, George W. Shaw. [Note 2]

A.I.D.: Now when you started teaching, was it a little unusual for a technician to become a teacher?

Madson: I expect it was. I don't remember. (Laughter)

A.I.D.: What do you suppose caused it?

Madson: Well, of course, the departments were very small in those days. You didn't have much personnel. You didn't have much money to hire people, so the staff just did the best they could and worked into it. In fact, when I came into the department, we had just the head of the department at Berkeley, Shaw, and he was doing the teaching and myself.

And then he had a man at Davis named A. J. Gaumnitz in charge of the experimental work here and he did a little teaching of the two-year courses. But that was the staff!

Then, in 1912, we got a new dean in the college of agriculture and we had quite a shake-up--there was quite a little change in the whole administration set up. Part of the work that I'd been doing as a technician was eliminated, and I had also been saddled with more and more teaching, so this was a gradual transition.

A.I.D.: You originally came to Berkeley, not to Davis?

Madson: Yes.

A.I.D.: You had no connection with Davis during those years?

Madson: Oh yes, I came up to Davis every once in a while. In fact, I used to come up and teach classes. You see, most of the students at Davis at the time were what were called two-year students. I did do some teaching up here. [Note 1]

Then after--about 1912--I got more and more involved in the work at Davis, and I moved up here in '14.

A.I.D.: You say in 1912 they had kind of a shake-up in the agriculture department. Do you remember who came in?

Madson: Yes, they got a new dean by the name of Thos. F. Hunt.

A.I.D.: I heard he was brought in specially by--who was president then, Wheeler?

Madson: Wheeler--

A.I.D.: --to kind of shake up the department. Is that right?

Madson: He shook it up good.

A.I.D.: How did he do that?

Madson: He just outright fired a lot of the--those members of the staff he dared fire. My boss happened to be one of them.

A.I.D.: What was the main criticism then of the department?

Madson: Well, now, I just never knew. I had a feeling (and I think a lot of them did too) that the new dean--Hunt--just wanted some of his own crew to head up the departments in place of the ones who were here, and it was not hard to drum up excuses. Of course, we didn't have tenure as we do have now.

A.I.D.: Was agriculture in those days taught scientifically?

Madson: That's a hard thing to answer, because when you look back now at that time, we had very little real scientific knowledge to teach, it was pretty much empirical, a lot of it.

A.I.D.: Well, when Hunt's people came in did they change that and make it more--

Madson: No, not particularly. They probably did a little. Some changes, but not particularly. No, that change had grown, I'd say, pretty gradually, though at times pretty abruptly. But go back to 1910, '12, our scientific knowledge related to agriculture was very limited compared to what it is now. One was in agronomy (field crops in general, of course); I taught a course in cereals. I taught a course called chemistry of plants which was really--partly elementary plant physiology and then the products that were made from field crops--technology, like sugar, flour, and various things of that kind. That was included in that course. Then the boss was also giving a course which I gave later called dry farming as agriculture under non-irrigated areas.

A.I.D.: You'd never taken a course in agronomy at Iowa State, but you started teaching it. Were there any problems involved?

Madson: Quite a little hard work. I had to keep one jump ahead of the class in some ways. I did quite a little digging.

A.I.D.: You developed those courses yourself?

Madson: In a way. I say he'd (George Wright Shaw) been giving those courses but he didn't give me any particular outline to follow or just general terms, so I had to develop it as I went along. But they were courses that were already in progress.

A.I.D.: Any textbooks?

Madson: In cereals we used--I think the only agronomy text of any note at that time was Hunt's *Cereals in America*, an old one. And there weren't many textbooks on the subject. You developed your subject from bulletins and some books and publications. Wherever you could dig it out.

A.I.D.: Have agronomic crops--the number of them changed any over the years?

Madson: Tremendously! Tremendously! See, when I came to California (I forget what our irrigated acreage was, but it wasn't very large) most of the land was dry farms, as I say, and most of it was wheat and barley--they were the two big crops. In fact for years we exported a tremendous amount of wheat to Britain. They liked our soft wheats. There were a few other crops grown. A little bit in sugar beets but not very much. You might say that the two large money crops were wheat and barley. Then there were forage crops, of course, like alfalfa and things that would come in on the irrigated areas.

Rice didn't start really moving until about '14 or '15--growing rice is dependent on the irrigation. Not many crops as compared with now.

A.I.D.: When did they put in their wheat?

Madson: In the fall.

A.I.D.: Take advantage of the winter rains?

Madson: Yes.

A.I.D.: And when did the wheat mature?

Madson: Usually in early June.

A.I.D.: When they sent it to Britain, how did the maturity hit the British market? Was it early, late, or what?

Madson: It'd be rather early, because in Britain--of course they have to import a lot of their bread stuffs--it could arrive there before their harvest. They brought in a lot from Australia, too.

A.I.D.: How did the wheat here compare with Australian wheat?

Madson: It was pretty much the same. We grew what we called a soft, white wheat which they liked back there at the time. We sold quite a lot of barley, too, to the British. All of our grain in those days was shipped in bags because that had been traditional, because going by boat, it had to go around the Horn. And if the boat cargoes were likely to shift, you could be in trouble in the rough seas. So, everything had to go in bags.

A.I.D.: Did it travel pretty well?

Madson: Oh, yes.

A.I.D.: So you started coming to Davis then to teach about the first year you were in Berkeley?

Madson: No, I would say about the third--about the last year or two that I was down there. See I was down there '11, '12, and '13 and part of '10. I came up here in January, '14.

A.I.D.: When you started coming up to Davis, how did you come, by train?

Madson: By train, yes. Had good train service in those days. Then, after I moved to Davis, I went back to Berkeley to teach courses. (Laughter) I did that quite regularly at one point, about twice a week for several years. We had good train service. We could leave Davis about seven o'clock or a little after and get down there and catch another train home about five. It wasn't so bad. We had good train service.

A.I.D.: Where did you live in Berkeley?

Madson: Well, I lived in a house not far off the campus--a boarding house that was close by. I had a room there.

A.I.D.: Do you remember what your expenses were? Could you save any money?

Madson: Not very much. I remember I paid ten dollars a month for a room and twenty-five a month for board--which I thought was high when I came out here. But, I got by.

A.I.D.: Well, you were making a thousand dollars a year, so you're talking about four hundred and twenty dollars of it right there.

When did you get married?

Madson: 1912.

A.I.D.: So you were in Berkeley at that time. Did you marry a Berkeley girl?

Madson: Yes, She was working on the campus. She was working in the Controller's office. She had just recently come out with her family from Minneapolis. I met her there in Berkeley.

A.I.D.: Did she continue to work after you were married?

Madson: No.

A.I.D.: What did they think about wives working in those days?

Madson: Well, I don't know, actually, but I can't think there were very many of them who did. I expect there were some, but I can't recall.

A.I.D.: So then you left the rooming house and you were married. What did you do?

Madson: We rented what you'd call a small apartment. That was in an old house, and then we moved into a larger one. Our rents were only about twenty-five dollars a month in those days.

A.I.D.: In those days could two live as cheaply as one?

Madson: Well, no, I don't think so.

A.I.D.: Did you get an annual raise every year?

Madson: Yes, pretty much. Of course, it only amounted to a hundred, two hundred dollars a year.

A.I.D.: This would still be ten or twelve per cent, wouldn't it?

Madson: Yes.

A.I.D.: Can you describe the campus at Davis from about 1914 when you got here? (I brought a map today of today's campus, if that would help you.)

Madson: Well, I can tell you pretty well. What is now the Quad was a field. In fact, we grew milo there one year and we grew alfalfa there for a number of years. The two old dormitories on the east side of the Quad were there. They were two of the first ever built. On the north side of the Quad there was another building that had the dining room in it.

Then a few years later they built another dormitory just north of the dining hall--that would be about where the student union is now, in that area. The little building just east of the Quad and south of the dormitory is still there. That was the office of the Dean--the administrator. Then on the south side of the Quad there was a creamery building right at the southeast corner of the Quad. That was about all there was there because there was a residence just west of that. And then there were some buildings on what is now Hutchison Drive just south of that. Where the home economics building is now, that was a veterinary building. Across the street-which building is still there--it's now houses and field stations. That was the animal husbandry building. And then there was on what is now Hutchison Drive some shops--chemistry, horticulture building.

That made up the main buildings except for the barns.

A.I.D.: Where were you mostly?

Madson: Well, I was in several places the first few years. The first office I had was upstairs in the creamery building. Then later we moved into a remodeled old house that was on the Quad and had our office in that for a while. And then when later the veterinary building was moved, we remodeled that for agronomy. We were in there until we moved into Hunt Hall. Then there was a poultry building out west of the Quad where the poultry plant is now.

A.I.D.: Let's talk about campus changes over these years. We're talking again about 1914, after you got here, let's say until 1919. Any great changes that you notice in the campus?

Madson: Well, not during that period there wasn't very much. In fact, our great changes, campus-wise, didn't really come about until along in the Thirties.

A.I.D.: Where did you live when you got to Davis?

Madson: Well, I lived in a little house which is now part of the campus. It was on the corner of A and Second Streets. There was about half a block in there that the University didn't own at the time. There were a few houses in there. That's where I first lived when I came to Davis.

A.I.D.: Where did the students live?

Madson: Well, most of them lived in the dormitories--those two large dormitories on the east side of the Quad and the one that was built later on the west side housed the bulk of them. But there was also quite a number who lived around town. Of course, the town wasn't very big at that time, and there weren't many places where the students could live. In fact, I doubt whether the town had a thousand population in those days.

When I came, Fifth Street was the north edge of town.

A.I.D.: Now, were all these students from Berkeley, or were there local students?

Madson: Oh no, they were from all over California. As I say, they were mostly two-year students. Most of the degree work in agriculture was taught in Berkeley. Now some of the students would come up here for a semester or two, whichever it happened to be. Those who were majoring in animal husbandry would be up here for a couple of semesters. Agronomy students would be here for at least one semester--some of them two. [Note 1]

A.I.D.: Now, would they go to school with the two-year non-degree students? Would they be in the same classes?

Madson: No, they had separate classes.

A.I.D.: How did they get along?

Madson: Pretty good. I don't recall any difficulties.

A.I.D.: Was this a two-year non-degree course--what were the requirements to take that? Did you need a high school education?

Madson: They were supposed to, but they didn't all have high school educations.

A.I.D.: When the students from Berkeley came down would they stay a semester or two semesters?

Madson: Yes.

A.I.D.: Where would they live, in the dorms, too?

Madson: Most of them in the dorms.

A.I.D.: It seems to me I heard reports that they were a little wilder than some of the two-year boys. Was that true?

Madson: That might be true. They had some pretty wild times. At least they did it for enjoyment and not to be destructive or anything like that as they do today. They weren't protesting anything.

They had their beer busts out on the creek banks. They had a few wild parties, but not too bad.

A.I.D.: Did you teach both the Berkeley students and the two-year students?

Madson: Yes. Then for a while there were two of us here, and the other fellow taught some of the two-year students. Then in about 1920 John Conrad joined the staff at Davis and he took over the two-year work.

A.I.D.: When you were teaching both, was there any difference in your teaching methods?

Madson: Well, not so much in the method as there was in the content. The methods were pretty much the same. You had to use pretty simple language for some of those two-year students so that they could understand what you were talking about. I know one day I was talking about organic matter decaying, and one of them said, "What do you mean by decaying?"

A.I.D.: Do you know the names of any of the students?

Madson: Oh, not very many of them. I've had so many names I can't remember.

A.I.D.: I wondered if any of them became well-known in any field.

Madson: Well, yes. That's one of the pleasures as I look back on it. As I travel over the state, I'd continue to run into former students who had become quite prominent in their communities in one way or another. It happened right along. I think that's the most satisfaction that I got out of that work.

When I moved to Davis in 1914, I was in charge of the general agronomy experimental work up here. That was the object of moving me to Davis--they wanted me to take over there. Gaumnitz had left. That was about 1912, and during the shake-up, he just got disgusted and quit when Shaw was fired. For one spring there, I was the only man in the department.

A.I.D.: Was that in the spring of '13?

Madson: That was in the spring of '13, yes.

A.I.D.: Were you teaching all the classes?

Madson: Yes, there weren't very many, in fact, I think I had to eliminate some of them.

A.I.D.: What did you do in the summers during this period, '14 to '19, around there? Did you teach summer school?

Madson: Even before I moved to Davis, I spent a lot of time up there teaching summer school. When the First World War ended we had some pretty large classes up here of returned service men--special courses.

A.I.D.: In those teaching days you were teaching all undergraduates, weren't you? There weren't any graduate students, were there?

Madson: No.

A.I.D.: And then later on you were teaching both undergraduate and graduate students?

Madson: Well, I didn't teach many graduate students. I had some master's degree students.

A.I.D.: Did you have any administration duties?

Madson: At the Davis campus I did, of course, reporting to the department head at Berkeley. I was responsible for the local administration.

A.I.D.: Did you get that responsibility when you first came, then?

Madson: Pretty much, yes. They set up a budget that I could spend and it was my job to see that the work got done. Of course, we hired field help and things like that.

A.I.D.: How many acres did you have here?

Madson: We had about forty to start with. They were out--what's now Hutchison Drive. You go out there just past the veterinary building and on the left side of the road there's a little old building that's still there that's used, I think, by viticulture. It's just this way from where we have our swimming pools. I think that's still there, and that was our headquarters.

A.I.D.: Did you have any research projects going at that time?

Madson: Well, they were pretty much empirical experimental work. First, when I moved to Davis on experimental work we did a lot on cereals which was pretty much empirical. And we experimented with alfalfa, corn and grain cereals and other general food crops. As I say, our big emphasis in those days was on cereals, because they were the big crops in California at that time. New varieties, cultural methods.

A.I.D.: Were there any campus committee assignments that you had?

Madson: Not in those early days, no.

A.I.D.: Who were some of the administrators in the organizational set up here at Davis? Who was the Dean?

Madson: When I moved up here there was Dean Huber E. Van Norman. He was one of Hunt's henchmen brought out from Pennsylvania. Before that they had had--well, they didn't call him Dean in those days. I forget what they called him, but more or less a superintendent of instruction, you might say. One of the general plant management. I don't recall exactly what they called him. I didn't know him personally.

But then Van Norman was here for quite a number of years and then he went East and Hutchison came out and was Dean at Davis. That was his first job. That was in the early '20's.

A.I.D.: Who was your department head?

Madson: Gilmore--a fellow by the name of J. W. Gilmore. He was one of the men that Hunt brought out with him at the time.

A.I.D.: How long did he remain as department head?

Madson: He came out in 1913 and he remained until about '25 or '26 and then he was replaced (for some reason) and we had another chairman of the department for about a year. And then in '27, I took over.

A.I.D.: What was your relationship with farmers?

Madson: Oh, very good! We've always had very good relations.

A.I.D.: Were they close at that time? How did they come about?

Madson: They came about through visits to different parts of the state. Through short courses that we had here during the winter--usually a few weeks.

A.I.D.: We're still talking about 1914-15?

Madson: Yes. And we had quite a few calls from farmers from different areas for advice on problems. We had no extension service in those days. That just started, in fact, about that time.

They had a director of extension, but he had no staff. So if he needed somebody to go out to a meeting on some particular subject, he'd recruit from the faculty to go out and do that. So I really got around quite a good deal--you might say in public service work. So we got to know the farming areas and key farmers in a lot of these areas pretty quickly.

A.I.D.: What was the impact of the war years--1914 to '18?

Madson: Well, they were rather disruptive. I was at Davis at the time, and as I say, the extension service (farm advisory, as we know them now) had just been started about 1913. I think there were only two or three farm advisors in the counties in California. Then when we got into the war, the government made funds available to put a farm advisor in every county that wanted one. Well, there were certain requirements that the county had to meet, such as providing office space for instance. The government and the experiment station would pick the man and provide him with salary and part of his expenses. That brought in demands for quite a few farm advisors, and where to get them. So, the Dean decided, "Well, the war's on. Probably not so much pressure for experimental work in teaching. So, we'll pick men from the departments to go on out and act as farm advisors until some other arrangements can be made."

So they did that and I served in 1918 from July to January 1st as farm advisor in Tehama County at Red Bluff.

A.I.D.: Seems to me I once heard an interesting story about one time when you looked at an apple tree there. (Laughter) What was that story?

Madson: Oh, there was an old fellow down the river that called up the office one day wanting me to stop in. He had a problem. He was a big, gruff old fellow. In his backyard, he had a big crab apple tree, and one branch was dying. He wanted to know what was the matter with it.

I said, "It looks to me as though it's got pear blight." He looked at me in disgust and said, "Hell, man, that's an apple tree!" (Laughter) I should have said fire blight and I would have been all right.

A.I.D.: I see. Let's talk just a little about that besides that one humorous anecdote--as farm advisor up there, what were your primary duties? Compare it, if you will, with being farm advisor nowadays.

Madson: I think they were pretty much the same as they are nowadays except that--nowadays they're probably a little more complicated. You see, the farm advisor, when it started out, was put into a county to advise the farmers on any problem--particular problem, local problem-- they had. And you were supposed to be on-call for them whenever they wanted you. You weren't supposed to go on a farmer's place and offer him advice--only if he asked for it. But you soon got so that you had quite a number of calls everyday to come over and see them. We kept pretty busy.

A.I.D.: How were you paid, by the University?

Madson: We were paid through the University, but most of it, I understand, was federal funds. I don't know how it is now.

Then we moved back to Berkeley in 1919, and I was there until 1924, when I moved back to Davis.

A.I.D.: Let's talk then about the years that you were back in Berkeley from 1919 to 1924. What did you do, primarily, teach?

Madson: Most of my work was teaching and I taught twelve to fourteen hours a week. I had two or sometimes three regular classes and then special problem students we called them then. That was my job, I was teaching, and that was about it. I was coming up here to Davis to teach a course now and then.

A.I.D.: Your load was primarily teaching. No more research, you didn't have any of that. Did you miss it a little?

Madson: Oh, I expect I did. But, as I say, I enjoyed teaching, I enjoyed the students, and it gave me an opportunity in those days to really get acquainted with the students. Classes weren't so large then as they are now. If you had a course with a class of twenty-five students, well, that was a pretty good sized class.

A.I.D.: And then you came back here to Davis in 1924?

Madson: Yes, and then I came up here in January '24, and I was here for just that semester, and then I took a sabbatical and went back to the University of Chicago in 1924-25 and returned to Davis in June 1925.

A.I.D.: What did you take at the University of Chicago?

Madson: Plant physiology.

A.I.D.: What made you do that?

Madson: It was the field I was interested in. It kind of jibed with my general philosophy of what agriculture should be, and I figured that the problems that I would be interested in--would be in that field.

A.I.D.: Had you any thought at the end of that year of keeping on and getting your Ph.D.?

Madson: Oh, I thought of it, but, in fact, when I got through there I was broke, so I couldn't continue going to college. In fact, I had some work to do to finish up. It would take at least another six months. Then I got to be head of the department and got into administration. Just didn't do it.

A.I.D.: How did they handle sabbaticals in those days--financially?

Madson: On a year basis you got two-thirds of your salary. And, you were eligible to apply after you had been here seven years. Of course, they didn't have to grant them if they didn't want to.

Then when I finally moved back to Davis I taught regularly six units and also some graduate students, but that was in addition to administration and experimentation station work. I taught--most of the time until I got out of the department, that was my schedule.

A.I.D.: I'd like to talk to you a little about your teaching--your point of view and your philosophy. You've never had any courses in education, as such, have you?

Madson: No, I'll tell you. I think I can illustrate my philosophy pretty well by the changes that I instituted shortly after I became chairman of the department of agronomy. Up to that time we had had courses in cereals and in forage crops and other kinds of crops. Just the routine kinds of courses other agronomy departments have. I thought it over and talked it over with one of my colleagues in Berkeley--Dr. P. B. Kennedy who was an agrologist in forage crops. I said, "Now, see here, when you're teaching courses in cereals and in forage crops, the empirical things are the same. You apply a little different technique, but," I said, "it's not fundamental." I said, "What I'd like to see done is to set up a general course in what we'd call crop production, but emphasize the scientific basis for growing these crops--for plant growth, generally--environment and all the other things." And I outlined a couple of other courses I had in mind.

Well, we discussed it quite a little and decided that that might not be a bad break. Claude B. Hutchison was Dean then--and I was in Berkeley one day and he came down to the hotel for something and we sat down and talked for a while, then I said, "Dean, I have something I'd like to spring on you." I went through this rigamarole and what I thought ought to be changed so that it would be better to teach these courses. Not to teach the empirical things--you've got to learn those wherever you go, and they might be different from one location to the other, but fundamentally the principle was the same. Let's emphasize the principle and the scientific basis for doing these things.

He said, "That's a good idea. When can you start?" (Realize that this was the middle of the summer.) "Well," I said, "I don't know." (Laughter) I had to get busy and work up a course. I had to get over to Fred Briggs to work up his course in plant improvement and plant breeding. We scratched dirt there for quite a little while, but we got going.

I think they've changed back pretty much to the old concept. I'm not sure. Some of the courses are the same. But I rather felt that I made a real contribution to agronomy in that respect. That illustrates pretty well; my philosophy of teaching of agriculture is to teach the scientific principles underlying the things that influence plant adaptation and growth. Not so much the empirical facts--that changes from one neighborhood to the next.

In fact, the general courses that I gave on crop production was the relation of crops to the environment and the effect of temperature and climate and rain and all of those things--the effect of soils and irrigation, etc. As long as I was teaching, that became a required course for all of the students in the plant sciences at Davis--horticulture, truck crops, and irrigation. So I usually had a class of two hundred or more.

And I also gave one in crop taxonomy which was more or less a course in which the students became familiar with the different agronomic plants, grasses and legumes and all other crops, and something on their environmental and soil requirements.

A.I.D.: You say that the concept is changing a little bit to the empirical?

Madson: I understand it has. I haven't followed it closely, but I understand it has.

A.I.D.: Back to the empirical?

Madson: To more of the empirical. Of course, there's more scientific background now than there was thirty years ago.

A.I.D.: Was there any difference between teaching at Davis or teaching at Berkeley?

Madson: No, I don't think so. In fact, the courses were pretty much interchangeable. In fact, I gave one of the courses here that was rather popular, and then the soils department in Berkeley wanted it given down there, but instead of three units they wanted it cut to two units, so I had to boil it down, But I gave that down there for two years for the soils department. They would have liked to have that continued, but I said, "No, I'm through traveling. I'm not coming down here to teach anymore." (Laughter) Because that was a twice a week trip to Berkeley.

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Ben A. Madson, 1930's

A.I.D.: You always had time, I've been told by everyone I've talked to, to talk to your students.

Madson: I tried to. I tried to. And, I say, I felt that was quite important, especially if they had problems that they wanted to discuss. The interesting thing is that their problem was often not related to agriculture, particularly, but some other course that they were having trouble in. And you'd have to kind of sympathize with them and guide them along as best you could. There's been a tendency of many professors not to give enough personal attention to their students--they leave it up to subordinates. Of course, we didn't have any subordinates (Laughter) so we had to deal with them. But, I know in recent years a lot of students have complained they never got really acquainted with the professor or the head of the department, or higher-ups in the department. I think there was a reason for that.

A.I.D.: This was a very rewarding part of your whole career, wasn't it?

Madson: Yes, it was. As I say, I could go--well, I expect I still could--anywhere in the state and I would run into somebody who had gone to school with me, as one of my students. Hardly a week goes by, as I go out to dinner but that some fellow comes up to speak to me and says that he was my student twenty, thirty, forty years ago. Of course, I don't remember them, but they come up and introduce themselves.

A.I.D.: Did they have any polls in those days? What kind of feedback did you get to know you were doing a good job teaching?

Madson: I didn't get any, except that the students seemed to be quite satisfied with what they were getting, but we didn't have any polls, as such. No demonstrations. I don't think that the students in those days felt that they knew how to run the University better than the staff, like they do now.

A.I.D.: With fourteen hours a semester, that was probably as much as anybody had, wasn't it?

Madson: Yes. That was a pretty heavy load. But, to do nothing *but* teaching, it wasn't too bad.

A.I.D.: Did you ever feel that the reward you got for good teaching was more teaching?

Madson: I think so. I think that was true. (Laughter)

A.I.D.: You were quoted by somebody as saying that in a paper written about you.

Madson: I think that's true, or was--I don't know if it is anymore.

A.I.D.: I've heard that for four years every agricultural student who majored in a production course took at least one course from you, personally. Is that true?

Madson: I expect most of them did. I suppose there were quite a number that didn't.

A.I.D.: It's been estimated that there were about ten thousand of them who were your students.

Madson: There probably were, I don't know. Enrollment in one course ran around two hundred.

At Davis, I usually did most of my teaching in the fall, and then in the spring did my field work.

A.I.D.: What kind of work in the spring?

Madson: At the experiment station.

A.I.D.: Well, can you describe a rather typical day in the spring when you were engaged in your experimental work? How would you spend your time?

Madson: Usually, I would get to the office in the morning and I would take care of whatever routine office work there was to do, and dictate letters--you see we didn't have any extension specialists in those days--letters from people asking questions about this, that, and the other thing would come to the departments. And you would get quite a lot of letters from farmers and others that would have to be answered.

I would do that in the morning, then in the afternoon, whatever experimental work there was to be done I'd give some time to--I'd do that mostly in the afternoon.

A.I.D.: Did you have some pretty good hired people on the farm?

Madson: Yes, we had some pretty good ones.

A.I.D.: Did you hire those people?

Madson: Most of them. They were mostly local people.

A.I.D.: Did you give students a job?

Madson: Yes, we used students quite a little. In fact, most of the students did hand work--taking soil samples and pulling weeds and helping with plantings, etc. In fact, there was quite a prominent farmer in Clarksburg, he's retired now--George Wilson--he was one of my students, and worked on the agronomy farm, when he went to school.

A.I.D.: What was your reaction to the New Deal method of controlling any surpluses that existed?

Madson: I think my reaction was that it was probably necessary to maintain a fair price for agricultural products. I don't know whether you can remember back to the first World War, when sufficient food production was really a problem. Remember, Hoover was U.S. Food Administrator. At that time we really had a shortage of food, as far as we and our allies were concerned.

I think it was the late '30's before we really got into surplus problems. Of course, we've been accused of contributing to it by producing varieties that are more productive and by teaching farmers how to produce more.

Of course, I think a lot of that surplus really built up after the second World War when we were unable to sell our surplus to the foreign countries. However, I say that's a question an economist could answer much better than I can.

A.I.D.: Were there any professional societies that you belonged to in those days?

Madson: I belonged to the American Society of Agronomy almost from the time it started. I guess the first three or four years I didn't, because I think it was started about 1912. Then, I am a Charter member of the American Society of Plant Physiologists which started about 1920. Then, of course, I'm a member of several honorary fraternities: Gamma Sigma Delta, Alpha Zeta, and Sigma Xi.

A.I.D.: Did professional societies take up much of your time?

Madson: Not much. I was President, one year, of the Western Section of American Society of Agronomy. I think that was about the only official duty I ever had and that was sometime in the '30's.

A.I.D.: Your biographical data shows your membership in the American Association for the Advancement of Science and the American Society of Range Management. Any others?

Madson: No, I think that's all.

A.I.D.: When did you first start publishing?

Madson: After I had been here in Davis a little while. Fred N. Briggs took over the work on cereals when he came to the department and another man took over other phases of the job. I devoted most of my time to forage crops. Alfalfa was an important crop, and I think my first publication of any note was a bulletin on alfalfa. I actually didn't do much publishing. I probably had twenty bulletins on one thing and another--eighteen or twenty, not very many.

I spent a good deal of my time on alfalfa in irrigated pastures, grains, and other forage crops. That was my field, forage crops, in most of my later years.

A.I.D.: Has there been criticism in some quarters that some of the articles written for farmers were too technical?

Madson: No, I haven't heard that. I never heard that. To be a farmer nowadays you've got to be pretty technical. Most of them are pretty knowledgeable.

A.I.D.: When did you first start getting the responsibility for building the department; when you were department head?

Madson: It started soon after I became department head, but it didn't make any real progress until quite a few years later because in the depression years, the University budget was cut pretty severely, and there wasn't much expansion or growth for quite a number of years, and I don't recall really when we did get a good budget started. It must have been late thirties or even later.

A.I.D.: Who was the first person you hired in the department of agronomy, and what was your position when you hired him?

Madson: The first man was John P. Conrad. And the reason I hired him was that Dr. J. W. Gilmore who was at the time the chairman of the department was in Chile for a year, and I was acting chairman of the department while he was down there.

A.I.D.: What year was that?

Madson: I think it was '21. He had already made contacts with Conrad and had practically arranged for him to be employed before he left. So, it was just a matter of formality on my part.

A.I.D.: I see. And then you went along as assistant chairman of the department until when?

Madson: Just for the year of 1921.

A.I.D.: When were you made chairman of the department?

Madson: Twenty-seven.

A.I.D.: Who did you succeed?

Madson: I succeeded Richard L. Adams who was acting chairman for one or two years--I forget what the period was in there. He was really an agricultural economist, but he'd been connected with our department to some extent, and so he was made acting chairman when Gilmore retired, or decided not to go on as head of the department. And then I succeeded Adams. I don't remember exactly the lapse of time in there.

A.I.D.: Who appointed you as chairman of the department?

Madson: The Dean of the College of Agriculture.

A.I.D.: You were then appointed department head in 1927, and you had full responsibility for building the department?

Madson: That's right.

A.I.D.: How many were in the department at the time you were appointed?

Madson: There weren't very many at that time. There was Professor George W. Hendry, who I'd mentioned before was at Davis, Conrad, Gilmore, and--I think that was all. William W. Mackie, who came in later, was with U.S.D.A. at the time, and so was Fred N. Briggs. They were located at Berkeley, but they were U.S.D.A. men.

There was another fellow in the department I didn't mention. He was Dr. P.B. Kennedy. He was in Berkeley. He came in before Conrad did. I don't remember just when. [Note 2]

A.I.D.: What did you conceive to be your primary duty when you took over as department head?

Madson: I conceived that my primary duty was to try to make it possible for the men in the department to--work happily, and not have to worry about administration matters. That they could do their work and that would be their job, and it was my duty to see that they could do that without interference.

A.I.D.: Did you have a tendency to teach more than would be the ordinary share for a department head in order to let your staff maybe have more time in research?

Madson: No, I don't think so. At that time, our staff was so small, you didn't have much choice. You couldn't pass it around too much. Now, I understand it is more diversified. Of course, that's been some of the criticism that you see in newspapers, that the teachers aren't putting in time enough teaching.

A.I.D.: All right, let's talk then about building the department first. You must have had certain standards and principles of hiring and recruiting. What were they?

Madson: Well, my thought was, and Hutchison and I discussed this quite a lot--I remember he told me when we started to build the department he said, "Go out and try to find the best agronomists you can find, and bring them here to head up whatever section of the department you want them to."

We argued that. I told him that that wasn't my philosophy. I said I'd rather go out and hire a young fellow who was well trained in some particular branch of science relating to agriculture and who had his future ahead of him rather than behind him, and to put him to work on the problem. Well, a good example was Dr. Fred Briggs. You see he'd been in Berkeley with U.S.D.A., just came in there after the first World War and worked there quite a while. But, while he was there he got his doctorate in genetics. I knew him pretty well and knew he was a darned good boy.

It's true he'd been trained in agriculture, but his main interest was plant breeding--plant genetics. So, I hired him. He was one of the first of the employees. And, I think it panned out very well. I say after I discussed it with Hutchison he agreed. "Maybe you've got a point there, get the young fellows who are well trained."

And as we went along--he agreed with me even more. Of course, during the Depression we didn't get the money so we didn't hire very many people until pretty near the second World War before we really built our department very much. Now we did get some graduate assistants--graduate students. Lowell Myler was one of them and Ernest H. Stanford was one.

A.I.D.: Things must have been pretty hectic in the late '30's and 1940's. Those were the years, then, when you apparently did much of your hiring. Can you talk about those years, particularly. Anything that you haven't already discussed?

Madson: No, I don't think there was anything. It was a period when we were hiring personnel, and when our budget was built up to where we could do things a better way. And, of course, we hired a good many personnel during that period. Horton M. Laude and Charles W. Schaller and R. Merton Love came in quite a little while before that (1940). Duane Mikkelsen and F. Paul Zscheile, and quite a group of the people came in during that period. [Note 3] I'd say we had gotten enough funds so that we could expand our work, but I think we had planned it ahead pretty well so that--we knew when we hired a man what we wanted him to do, what we were hiring him for. It wasn't just a matter of bringing a lot of people in and try to find something for them to do. We had to show a real need for them before we could get the money for them, in the first place. So, I don't think it was particularly hectic. And during those years I got a lot of help from Dr. Briggs. I'd discuss problems with him because he was a pretty level headed chap, and so I didn't think it was particularly hectic. And, of course, having done that, that put him in a good position when he had to take over.

A.I.D.: It was easy to pick your successor; you'd developed him already.

Madson: Yes, which was an interesting thing, because, right along, agronomy has picked its own successors. In a lot of the other departments, when the head of the department would get too old or quit and they had to get a new one, they'd appoint a committee to find someone to head that department. I never did think that was a good solution. I think we always had people who had

had a little background of experience because we always tried to see there was someone there who knew the ropes to take over.

A.I.D.: I've heard it said that a good executive's first responsibility is to find his own replacement and train him. You'd agree with that?

Madson: Yes.

A.I.D.: Wasn't Jerry Fielder one of your own students?

Madson: Yes, he wasn't a graduate student, but he was one of our students.

A.I.D.: What is he doing now?

Madson: He's the director of the State Department of Agriculture. [Mr. Fielder died in the crash of his small plane in March, 1972. --A.I.D.] Earl Coke was one of my students. He is now in the Reagan administration. He's one of the top flight cabinet officers over there.

A.I.D.: Any other students that come to mind, whether graduate students or not? Well, of course, Myler, Lowell Myler.

Madson: Yes, he took over my job as Director of Field Stations. He was one of the graduate students. He came out here in the middle '30's.

A.I.D.: What were your requirements for hiring faculty? First, that they had to have a thorough grounding in basic science?

Madson: Yes.

A.I.D.: Now, where did you find these men? How did you look for them?

Madson: I think what I did primarily was write to various institutions and indicate our requirements. Now, as far as Dr. Love was concerned as an example--Briggs was going East to some genetic conference, or something, and I said, "While you're there, look over the prospects you might find that would be interested in the job we have here."

Because we wanted a man trained in genetics, primarily, and physiology and related subjects. Well, he picked on Dr. Love, and that's how I happened to get him.

Then Schaller came from Wisconsin. I think we recruited him direct from Wisconsin.

A.I.D.: Did you go there personally, or by letter?

Madson: By letter--most of them by letter. We didn't run all over this country and the globe like they do now.

A.I.D.: Who did you write to; the department head?

Madson: The department head.

A.I.D.: What did you say, in essence?

Madson: Well, I said, in essence, the position we had to fill, what we felt that the training was that we wanted the man to have in that field, and indicate about the salary range that we could pay. Then they would recommend someone and we would correspond with the appointee.

Often we'd pick on an institution where we knew they were giving good training in the particular branch that we wanted. Oftentimes we didn't write to more than one.

A.I.D.: But when you did, I was wondering how you'd select one man out of three or four prospects.

Madson: A matter of judgement, I guess. I recall Dr. Briggs after he became head of the department, he had a position to fill and came around to me with a prospect or two and said, "You know, I'm getting so that I hate to fill these jobs." I said, "Why?" He said, "Well, we've done so darned well in the past we're going to pick a lemon sooner or later." (Laughter)

A.I.D.: Did you require doctoral training in the basic sciences before you'd hire a man?

Madson: Not necessarily; it depended on what we hired him for.

A.I.D.: Were most of the people that you hired young Ph.D's?

Madson: Yes, because my philosophy (and also it coincided with the ideas of the older men in the department) figured that we'd better get young men well-trained in some of the basic sciences that could contribute to agriculture, like geneticists, physiologists, ecologists and people of that kind. I guess it just happened that the best men were men who had taken graduate work in those fields.

A.I.D.: When did you come to that conclusion, that they would be the best men to hire?

Madson: Well, pretty early in my career as chairman of the department, and I expect it stemmed a little from my own experience, since I had had no work in agronomy. I did have a good background in chemistry and in plant physiology. I know I argued with the Dean when we started to build the department, which I think we've already covered. It would be better to get young men who had a good training in some particular field and let them make their own way rather than to get someone who might have a lot of experience in agronomy but not much research ability.

A.I.D.: Or somebody, maybe, who was going downhill faster than he was going uphill.

Madson: Yes, because the fact a man may have made a reputation in one institution, you move him to another in a different environment, and he might not be able to do anything.

A.I.D.: Yes, I remember we talked about this, but I was just curious when you came to that conclusion. I'm trying to develop the fact that a man of your reputation--a man who knew production crops so intimately, both from a scientific as well as an empirical point of view--and yet, you, yourself didn't have a Ph.D. So I'm trying to develop how you began to feel that basic science Ph.D. requirement was so necessary.

Madson: As I say, I don't think that I actually required a Ph.D., but it happened that the men trained in the basic science that we wanted were men who had their graduate work and Ph.D. Of course, I had some men who didn't have, like F.G. Parsons, who took care of the plant improvement section. He didn't have a Ph.D. and still doesn't, but the kind of job he's got doesn't require it. And there's always jobs at the station like that. We have some men out there on the staff now--I don't know how many--who don't have a Ph.D.

A.I.D.: What was Parsons' job?

Madson: Well, his job was seed certification--managing the seed certification program, which he still does. [Note 3]

A.I.D.: In the department?

Madson: It started in the department and the department is still involved, but it's developed on a much broader scale now. But he was employed for that particular purpose. It wasn't a job where a particular scientific training was needed, but rather experience in that particular field.

A.I.D.: After you hired this new man, how did you supervise him, or did you? How could you tell if he was a good teacher--or a good researcher?

Madson: Well, it was probably easier to tell if he was a good researcher than if he was a good teacher. I must admit that this is one field where I think many of the departments have fallen down. I'm not sure we didn't, too. The trouble with the universities, the institutions of higher learning, is if a man has got a Ph.D. and is a good researcher, they just assume he's a good teacher, which isn't always true. However, I think most of my appointees and Briggs' appointees turned out to be pretty good teachers.

A.I.D.: How would you tell if he was a pretty good teacher?

Madson: Mostly from the reaction of the students.

A.I.D.: Did you have standards other than the man's competence in his field? For example, you had an offer when you first started out in 1910 from someplace down in Louisiana. Was there any feeling about a northerner being hired down South or a southerner being hired up North?

Madson: No, I don't think so.

A.I.D.: Of course, in the '40's I'm sure there wasn't.

Madson: Of course, this was back in 1910. No, I don't think there ever was.

A.I.D.: How about a man's personality? Did that enter into hiring him or not?

Madson: Well, I don't think too much. Probably not as much as it should have. Trouble as far as personality is concerned, most of our contacts were by correspondence. We had to rely pretty much on the fellow who was making the recommendation and the associates of the fellow back there as far as his personality was concerned, realizing that there had been cases where somebody had recommended someone pretty highly just to get rid of them. However, we never fell into that trap, apparently, but it has occurred.

A.I.D.: Do you remember how you kept out of that trap? (Laughter)

Madson: (Laughter) No.

A.I.D.: Just luck?

Madson: Just luck.

A.I.D.: How did you enter into the picture, or did you--let's say the man has been here in your department for a number of years and it's time his name comes up for promotion to associate professor, how did you determine whether he should be appointed to associate professor? Or to a full professor?

Madson: Pretty much on his performance. Of course, I'd say that has been based pretty much on research and not so much on teaching, although we did try to emphasize that. Although you didn't have specific things to point to in teaching very often as you did in research--publications and things of that kind, and the quality of research and how it was taken by colleagues in other institutions and so on--how it was regarded.

So, when the time came that a man was eligible for promotion, you just wrote a letter setting forth his qualifications and his record and that went to the committee that was considering the appointments.

A.I.D.: Was this a Davis committee or was it Berkeley?

Madson: Not necessarily. It could be a combination of Davis and Berkeley.

A.I.D.: Can you remember any times that you had an instructor that you didn't recommend?

Madson: Yes, I think I had one.

A.I.D.: How did you handle it?

Madson: Just didn't recommend him.

A.I.D.: Did he stay on?

Madson: Yes. I saw somewhere in the paper the other night that some fellow at the Law School wasn't recommended for promotion--he was quite peeved about it, but I noticed he wasn't going to quit.

A.I.D.: How much influence did Dean Hutchison have in the promotions?

Madson: I don't think very much. That was pretty much up to the departments and the committees. Of course, I guess the Dean was involved. It's not too clear to me now what the final steps were in that.

A.I.D.: You said that one of your big responsibilities when you took over was not only to bring able men into the department, but to enable them to do good research and to get along well together. How did you enable them to do good research?

Madson: Of course, I couldn't enable them to do good research, that was dependent on their ability, but my responsibility was to see that they were financed as far as their projects were concerned--adequately, they had the facilities to work with, and that the time was not spent on extraneous duties--committee assignments and all that kind of thing which I held off as much as possible. And there were always lots of other odds and ends which need to be done around an institution of this kind, but I tried to shelter them from those things if they wanted to be sheltered.

Of course, there were certain things that they liked to participate in and should, but I didn't want to dilute their efforts.

A.I.D.: You sheltered them by taking over those administration duties that otherwise they might have to do?

Madson: That's right.

A.I.D.: What did you do to enable your staff to get along so well with each other besides picking people through good judgement (or luck)?

Madson: I don't know that I contributed anything to that. I think it was just a matter of personalities.

A.I.D.: Well, did you have department parties?

Madson: Not very much. We didn't indulge in many social activities. I think we had a party a year or something like that.

A.I.D.: This, then, had no bearing on the other. How did you communicate with your staff?

Madson: Personal contact, usually.

A.I.D.: Did you have regular meetings?

Madson: Oh, we would have staff meetings. Not regular, but if some general problem came up we always had staff meetings. At least once a year we had quite a budget hearing. In making up the budgets for the departments I had each man present to me an estimate of what it would cost to carry on whatever project he was working on--project or projects--which usually added up to more money that there was, or more than it was possible to get. Then we'd have a staff meeting and see just where we were. We might have to eliminate some things for a year until we got more money. It was just a matter of give and take. Of course, I had to make the final decisions as to where the money would go.

A.I.D.: This was in making up the budget that you presented to the Dean?

Madson: Yes.

A.I.D.: Did budget planning change much when Davis became autonomous, or independent--had its own budget?

Madson: I don't know that it did. You see up until the late '30's (I forget just when it was) we had a couple of men in agronomy in Berkeley, and it was a departmental budget--had to set up so much for Berkeley for their work, and so much here. Gradually I moved all the departments to Davis. We don't have a representative--haven't had for a good many years--down there. It was a departmental budget.

A.I.D.: What I meant, was there any difference in handling your budget needs with Davis people rather than Berkeley people?

Madson: No, there was no problem.

A.I.D.: Would your budget be approved in its entirety, mostly?

Madson: No, when it came back you'd have to make further cuts.

A.I.D.: Then you'd have another meeting?

Madson: We'd have another meeting. I think that's the usual procedure wherever budgets are presented. (Laughter)

A.I.D.: So you made it possible for them to do their own research by getting them facilities and getting them money.

Madson: That's right.

A.I.D.: Did you very often have to defend them against anybody?

Madson: No, I don't think so.

A.I.D.: What were the facilities for research when you took over the department?

Madson: Well, they were meager, but probably they were adequate for the time in which we were operating--never fully adequate, but our facilities were not too bad. We probably planned our projects pretty much according to the facilities we had to work with.

A.I.D.: How did you go about deciding on your research: who does what, who works with whom, how much money goes to each man and all of that? Tell me a little, please.

Madson: We decided that as far as research was concerned, what problems do we have that we need to work on. How much money is it going to cost to carry on research, and where can I get a man who can do it?

Now, that kind of information would develop usually in departmental meetings and conferences for staff members.

A.I.D.: These projects, were they mostly dependent upon what problems had developed in California agriculture?

Madson: One example of one that I worked on myself was when alfalfa wilt first showed up in the state. That was in the late '20's and we started to get a lot of complaints from farmers about their alfalfa dying out. Well, I didn't know anything about alfalfa wilt except that it had been discovered back in the Middle West and I had read some literature on it and knew what to look for. So it looked like a problem that ought to be investigated because alfalfa was an important crop in California and destined to become more important. So I thought the first thing is to make a survey of the alfalfa-growing areas and see how wide this disease had spread in California.

There was no money budgeted for that, of course. It was entirely new, so I went to the Dean and told him the problem and that I thought a survey leading up to a study of the condition should be made. He said, "How much money will it take?" I estimated how much the survey would take and I said, "We can't make an estimate on anything else until we know what the problem is."

So I gave a figure on how much money I thought would take to make the survey. "What if you don't get it?" I said, "I won't make the survey." He said, "I guess you answered that!" So he gave me the money. (Laughter)

A.I.D.: And you found that it was pretty wide-spread?

Madson: Mostly in the San Joaquin Valley and southern part of the state at that time. As I recall I didn't find any at that time up here, but it was quite general.

Well, two U.S.D.A. men, one was named Weimer, had been working on it in Kansas and some of the midwest states, and had developed a lot of information on it. And then to confirm my field observation on it I kept sending specimens on it back for identification. They identified it. I sent a lot of specimens back from down around Riverside and that area, but they couldn't culture any organisms out of it. It had all the earmarks of wilt, but they just couldn't culture any organisms out of it. Well, they sent back, "Try to put up some in this kind of media and that, and send it back here."

So I did that for quite a little while. I sent a lot of stuff back prepared in different ways, and they still couldn't get an organism out of it, so they decided they were up against something different. So then Dr. Weimer came out to Riverside to make a special study of this.

So Weimer worked on it there for two or three years, and he and I got out a brochure on it. He did the work--the writing and I just got my name on it. But that turned out to be an entirely different disease with superficial characteristics the same as wilt. What they call alfalfa dwarf.

A.I.D.: If you hadn't started this thing and he hadn't come out, and they hadn't found the cure for alfalfa wilt or dwarf, did it threaten the whole alfalfa crop in California?

Madson: Well, no, not entirely. It would have shortened the period in which you could leave a field in alfalfa. It would have probably been cut down to a maximum of three years.

Since that time there's been a lot of plant breeding done and we have a lot of alfalfa varieties resistant to wilt, and that's really the only solution to the problem. Because the disease got pretty wide spread over California and practically all the alfalfa that's planted now is resistant to wilt, so we don't have that problem anymore.

A.I.D.: Was there any answer before they were able to breed a wilt-resistant plant?

Madson: No, just use in short rotation. It lasted about three or four years, and that was as long as it would last.

A.I.D.: Is this when you also started growing vetch to see if that could be a substitute?

Madson: Oh, we had been working off and on on that for quite a while. Dr. Kennedy worked on it some out of Berkeley and I followed it up some here, and, of course, we always had grown some vetch especially up at the north coast area, but it was a matter of what other areas we could use it in. That was mostly just empirical testing and nothing very fundamental about that.

A.I.D.: Any other diseases or insects that threatened alfalfa that you had to do with?

Madson: Not very much. Of course, we always had the minor diseases--leaf diseases and things like that. And, of course, the alfalfa weevil was always a threat, but it never became very serious here, and I don't think it ever will because of the high temperature in the summertime. It was evident that the answer to alfalfa wilt was to breed disease-resistant varieties.

A.I.D.: Was producing a disease-resistant variety part of the research that went on in the department of agronomy?

Madson: Yes.

A.I.D.: Who, particularly, would do that work?

Madson: We didn't do very much in it at the time I was department head. We hadn't gotten around to that very well, Madson: but since then they've done quite a bit. I think Stanford is involved in it.

A.I.D.: Why did you work with P.B. Kennedy back in 1913 on Sudan grass?

Madson: Kennedy was in our department in Berkeley. His training was pretty much in taxonomy as related to agriculture. He was a forage crop man and was supposed to work on forage crops, and, of course, Sudan grass was a new one. He got interested in it and he had us run experiments with it here at Davis and at other places, which was under my supervision. That's how we tied it together. So, we just wrote a small bulletin on the thing.

A.I.D.: And then W. S. Ball on weed control, also with A.B. Crafts and W. W. Robbins.

Madson: That was pretty much of an involved thing. When we got into the weed control thing seriously Dr. Robbins really headed it up for the University and Ball for the State Department of Agriculture. That's when chemical control first became of some interest, and was tried here, there and yonder, and I got involved in it pretty much through trying out certain chemicals on morning glory control and things of that kind. So, it was just one of those things where several people had become involved and they felt that a bulletin was necessary. I don't think I wrote any of the bulletin, actually. Pretty sure I didn't, but I was involved in it so they put everybody's name on it.

A.I.D.: What was his field, W. S. Ball's?

Madson: Well, he was with the State Department of Agriculture, weed control.

A.I.D.: And A.B. Crafts?

Madson: He was in the botany department here, he's my next door neighbor.

A.I.D.: Now?

Madson: Yes. He's retired, too.

A.I.D.: And, of course, W. W. Robbins was chairman of that department. What is Cucamonga Brome? [See page 95, Appendix A]

Madson: Oh, it's just a form of brome, annual brome, it was pretty good forage that seemed to take hold better on some of these mountain ranges than some of the other forage crops that we had.

A.I.D.: Were you researching it to find out about re-seeding?

Madson: Yes. Most of our work was done down with the Soil Conservation Service at the Pleasanton nursery and they did their re-seeding down there. Since I left, I think they are still cooperating, or were for a while with the department here and especially with Love.

A.I.D.: You worked with Paul E. Lemmon and A.L. Hafenrichter. They were U.S.D.A., too?

Madson: Yes, they were with the Soil Conservation Service, U.S.D.A., and they had an experimental nursery down at Pleasanton, and I worked with them for quite a while in an advisory capacity.

A.I.D.: You did a bulletin with J. Earl Coke on Ladino Clover. What brought that research about? What was the problem?

Madson: That wasn't really a research problem. In the '20's somebody had tried out Ladino Clover on some of the shallow irrigated soils and found that it did pretty well. From that, mostly through the extension service, and Coke was the extension agronomist at the time, we got it tried out on other areas in the state to more or less find what the problems of growth were, where it could be grown and so on and so forth. As I said, since he was extension agronomist and I was working on forage crops, we worked together on that. But it was just a matter of where could you use it to advantage. And, of course, since that time it's become pretty popular, especially in the rice growing areas.

A.I.D.: Does it cause bloat?

Madson: Yes, if it's not handled properly it will. So we tried to select our research projects on the basis of the problems that were facing agriculture. Take Dr. Briggs again as an example. In our cereals, rust and smut were two of the most destructive diseases, so he was interested in breeding varieties of wheat that were resistant to these diseases. He worked mostly with wheat to start with. And, of course, he succeeded pretty well in getting varieties--acceptable varieties--that were resistant to these two major diseases.

A.I.D.: If he hadn't succeeded, would there be any wheat growth today in California?

Madson: Oh yes, wheat has been grown with the diseases present for many years. But, some seasons you'd have high losses.

A.I.D.: Would you discuss these research projects among your staff at certain times?

Madson: Oh yes, we'd always have meetings and each member of the staff would present his research project and the progress he'd made on it would come up for discussion. That happened very frequently.

A.I.D.: Were most of them, then, more applied science rather than research?

Madson: Yes.

A.I.D.: Were there any pure research projects going on?

Madson: Well, Zscheile was hired for that purpose. I don't know how well he's doing. He's been here quite a while. But here was the problem: Briggs had developed through his back crossing techniques a variety of early Baart wheat, which was one of the popular varieties, that was resistant to smut and rust. Now, as far as you could tell from grain or anything else, the variety he came out with was identical to the original Baart wheat, because he'd bred back until he got the same characteristics. Now, the question came up that always intriqued me; and I talked to Briggs. I said, "Now, you've got two plants here that are identical as far as you can tell. One is resistant to the disease, the other one isn't."

I said, "Chemically, there must (physically or chemically) be some difference between those two plants, what is it? Let's hire a good biochemist and see if we can find out."

Well, it intrigued him, too, and that's why Zscheile came. And since then, there have been other problems with economical implications such as, was there a lot of drop off in cotton bolls, under certain conditions--what happens in the plant?

Many of these projects have a lot of fundamentals behind them. Those were the kinds of problems that I was really interested in.

A.I.D.: I can see that. Was there much interdisciplinary research? Agronomists with other disciplines?

Madson: Oh yes. I wouldn't say there were many really formal projects. Of course, work in forage crops naturally tied in with animal husbandry, because after all, a forage crop is an animal feed, and so we had connections that way, but no formal projects. They've gotten into that more on the range stations now.

A.I.D.: How about working with the ag-engineering people? Did you do this?

Madson: Only to a limited extent, I would say.

A.I.D.: How about flax threshing with Roy Bainer and L.G. Goar of Ag-Engineering?

Madson: Of course, a lot of these mechanical harvester problems, ag-engineering was interested in, although it didn't necessarily tie in with our department so much. The rollers that ag-engineer Bainer developed for flax was pretty much just a harvesting problem and didn't tie in very closely with any of the department research.

A.I.D.: Sugar beets is an agronomic crop, isn't it?

Madson: Yes.

A.I.D.: Did you work on the sugar beet harvester?

Madson: No. In fact, while I was in the department, sugar beets were handled not by agronomy, but by botany.

A.I.D.: By W.W. Robbins? (Chairman of Department of Botany)

Madson: Yes.

A.I.D.: Why was that?

Madson: The reason was, before Robbins came out here he had been in Colorado, and he'd worked with sugar beets while there. He was still interested in sugar beets, so when he came out here they let him continue to handle all the sugar beet work. As far as mechanical harvesting was concerned, I don't think he had any connection with that, particularly.

A.I.D.: Before we leave this subject of research, are there any other projects that you are particularly interested in that we haven't talked about?

Madson: Personally, I was very much interested in the range work.

A.I.D.: As department head?

Madson: Yes.

A.I.D.: Would you discuss various phases of that, please.

Madson: The Klamath Weed Project started out in Botany, and Dr. Robbins headed it up for some time. [See page 95, Appendix A] He had a man stationed in Humboldt County, and they worked particularly with weed sprays and things of that kind to try to see if they could get something that could control or destroy the Klamath weeds.

They worked for a while but they weren't getting the results that they had hoped for, so then they turned it over to agronomy--turned it over to me since I'd been working on range projects. I took a little different tack, and that was that we'd try through range management and perhaps reseeding with adapted species to get something to compete with the Klamath weed to provide feed. And we made some progress, especially in the management phases of the thing. However, then at that time, the biological control people at U.S.D.A. came into the picture, and they brought in (I can't give you the scientific name of the insect, I'm sorry) this Klamath weed insect from Australia. They brought in that and bred it and distributed it in the county for trial purposes. That was really the successful control of Klamath weed. Now, before they could do that, they had to test it out on all known crops to be sure that it wouldn't wipe out something else, but that was really the successful attack on the Klamath weed which came through the Department of Agriculture biological control. That was really remarkable, what that did.

A.I.D.: Did they sell those to the farmers?

Madson: No, they bred them in the greenhouse there in Berkeley, and then they just distributed them here and there in areas and they bred by themselves.

A.I.D.: Klamath weed attacked what crop?

Madson: It didn't attack, it just competed with--the range became infested with it, and it was so well adapted to the range that practically nothing else would grow with it. The livestock couldn't eat it, and it just took over. There were just thousands of acres of good range land that was taken over by this weed.

A.I.D.: It was a problem only with the range. You didn't have to worry about--

Madson: Not so much in cultivated areas, because they could cultivate it out, but out on the range, this was not feasible.

A.I.D. What did it look like?

Madson: It's an herbaceous plant with a head of yellow flowers, and it's not a bad looking plant. In fact, you go through some of these seed catalogs from the East and they list Hypericum as an ornamental. I heard of one woman up in Humboldt County; sent East for some of this flower. Of course, she didn't know what Hypericum was and she got some and it came up and she said, "It's that darned Klamath weed!" (Laughter)

A.I.D.: Someone told me that you have studied the agriculture species of the world, and that you could supply the names of all the important species and their common name, and how their crops respond to California conditions.

Madson: (Laughter) I think that's kind of overdone!

A.I.D.: Would many people in agronomy find this kind of knowledge helpful?

Madson: I don't know. Actually, that was true pretty much of the forage crops that we could grow in California. And in just a matter of working with them I got so that I knew most of them, but I wouldn't cover the whole range of agronomic crops, by any means.

Part of the general forage crop program required work on range improvement--range management, to some extent. Of course, that has developed very much since I left the department. We were just really getting into it. This whole brush range program goes way back to the twenties. There had been for years quite a lot of controversy between the Forest Service, both federal and state, on how to handle these brush lands. In the old days before we had a forest service, farmers used to set them afire in the fall of the year when they'd move out of the forest areas and burn off the brush, there would come up a lot of green sprouts and they'd have some feed again the next year. [See page 92, Appendix A] The last man out of the hills in the fall would set the brush afire. That would mean the next spring he'd have a lot of tender green shoots and other vegetation and he'd have some feed on that range. That was all before we had any Forest Service. Then, when the Forest Service was inaugurated, the one philosophy that developed was that fire was an unmitigated evil, that it just had to be stopped.

So when they gained control, there was no burning permitted on these areas, although there was still some burning; some of the ranchers would manage to set a fire, but in the main it was strictly curtailed which, of course, the livestock men didn't agree with at all. And that controversy developed over a period of years. In fact, as I look back on it now, for quite a number of years after the Forest Service was established and the State Department of Forestry, they were primarily fire departments. That was their main job. So that really gave rise to the controversy between the foresters and the livestock people.

Well, the argument was always hot. So, in the early '30's the livestock interests persuaded the College of Agriculture to see if they couldn't do something about it and try to get some facts on this controversy. Whether burning the brush was terrible or whether it produced more feed.

So the Dean did appoint a range utilization committee to study the problem. On the committee was Dr. George H. Hart, who was head of the animal husbandry division, Dr. Frank Veihmeyer, Professor of Irrigation, Dr. Tracy I. Storer, Professor of Zoology; and Dr. A.W. Sampson who worked on range problems with the Department of Forestry out of Berkeley, and then there was an agricultural economist, Dr. Weeds. I think that constituted our committee. I think Hart was the first chairman of the committee. He was chairman for a couple of years, and then I was appointed chairman. I was chairman of that committee for quite a long time--until I retired.

As I say, this committee was formed, then we arranged with the State Division of Forestry to set up an experimental burn. We picked an area with the foresters' help out in western Shasta County on the Duncan Creek Range area. I forget the exact acreage for this area, but there were two parcels of around seven hundred acres each.

We burned one and left the other unburned, and then we had cattle put on them in the grazing season (in that area winter and spring), and tried to keep a record of what we got off of it. Actually, it happened that the first year we had a pretty good year as far as feed growth was concerned on the area we'd burned, so the cattle there did fine. The others damned near starved to death because there wasn't anything over there but brush to eat.

Later we burned the other side and let the first one grow up. But the records weren't too good on that with one thing and another. We did get some worthwhile information out of it.

There was quite a little interest developed in other areas of the state mostly through the farm advisors. Some of them started what they called "controlled burns."

After a few years we had developed some information on what could be expected, you might say, after a burn as compared to before, and some information on reseeding these burned areas. We set up a few of what we called "controlled burn areas," in which case we cooperated with the rancher and he would get a permit from the State Forester to burn a certain area, and we worked with him to the extent that we would help with reseeding and keeping records and things of that kind, and try to get some information that way. We got a few of those that worked out pretty well, and so we made some progress. Down in Madera County, the county agent was very active in that program and he did a lot of work on the use of controlled burn as a step in range improvement. It was all instigated pretty much through this range committee. Then, in the final analysis, we set up the range experiment stations, one in Hopland and the other one up here out of Marysville, on the east side of the valley. The federal service did have an experiment station out of Madera on the east side of the San Joaquin Valley, but they never got anything very concrete out of it because they were still working on the philosophy that fire was a bad thing and you shouldn't use it if you could possibly avoid it.

It wasn't until the early '40's that the State Department of Forestry reluctantly set up what we called a controlled burn program, which meant that they would issue permits to a rancher to burn certain areas under his control with the supervision of the State Foresters. That went along for quite a few years and there were several thousand acres burned under those conditions and considerable ranch improvement work was undertaken.

The thing that really developed out of that was that in some areas reseeding after a burn was very successful and in others it wasn't very successful, which is about what you'd expect. And also the fact that in many of these brush species, if you burned it and then reburned it within a few years when the shrubs were still not too high, you could actually kill off most of the brush. As to what's going on now over the state, I don't know as I haven't been in touch with it for years.

A.I.D.: What happened to that portion of the land where you had a controlled burn--what happened to the water on it?

Madson: Nothing happened to the water, really.

A.I.D.: It didn't increase the flow of the springs?

Madson: On some, yes. On the one we had west of Redding there were no springs. The one east of Redding on a ranch property, the flow of some of the springs increased materially. They would run for at least a month or two longer in the summer after the burn than they did in the summer before.

In the early '40's when this whole brush burning program--range improvement program was getting really developed, the State Board of Forestry appointed a committee they called the Range Advisory Committee to the State Board of Forestry, and I was chairman of that committee for quite a number of years, at least ten or fourteen years; I don't remember just how long it was--up to my retirement. I understand that committee has gone by the boards now. I don't believe the

University is involved in that anymore at all as I understand it, though maybe to some extent. [See page 91, Appendix A; see page 99, Appendix B]

I think the department still has cooperative work going with the ranchers in areas, but since the range stations were started, they concentrated much of that activity on those stations.

A.I.D.: Do you recall who was on the Range Advisory Committee?

Madson: No, I don't remember their names. [See page 99, Appendix B] There were ranchers and foresters and others on that committee.

A.I.D.: How often would that committee meet?

Madson: That committee only met a couple of times a year. We always met when the State Board of Forestry had a meeting.

A.I.D.: Was most of its business taken up with this range brush burning project?

Madson: Yes, range improvement project in general.

A.I.D.: It would be interesting to hear you talk about the fact that you chaired that range advisory committee and forestry was so opposed to brush burning.

Madson: In view of the information that had been developed, they realized that here was something that people wanted and there might be possibilities in it, and so as I say the State Board of Forestry then (even though some of them had opposed this burning program vigorously) realized there was probably something there that needed to be studied and developed. The State Division of Forestry got out publications for a few years that showed the number of acres that were burned under permit and quite a lot of data on the whole thing. [See page 91, Appendix A]

A.I.D.: What's the setup on that today?

Madson: I think that the foresters, themselves, as I understand it, have changed their viewpoint a lot on some of these areas. Of course, according to state law, they couldn't go out and start a fire. They could put it out after it was set, but somebody else had to be the goat and set it, and I expect that still holds pretty much, although I think they are doing some winter clearing on their own as a protective measure.

A.I.D.: Did the law also say that you couldn't burn even on your own property?

Madson: Oh, yes.

A.I.D.: Was that part of the law changed?

Madson: I don't think you can yet except under permit from the State Department of Forestry.

A.I.D.: The permits--are they more easily granted now that the forestry sees the advantage of the burning?

Madson: I don't know how they are now. I know they did become for a while there easier to get, but there was still some hesitancy on the part of ranchers because they had to assume any responsibility for the fire getting away and causing damage.

A.I.D.: Yes, that would give you pause.

Madson: Yes. [Note 4]

A.I.D.: I read somewhere that there are about thirty million acres of range land. What's your opinion on the best way to use that land in the future?

Madson: About the only way you can use it is for range or for recreation. Those are the basic uses for it. But many of the areas, of course, have a low range value. We have close to twenty million acres on which the main vegetation is brush. A great many of these areas can be converted to good range.

A.I.D.: By brush burning?

Madson: By burning, and by reseeding, it's really a farming operation. There's been quite a little done on that, more in recent years.

A.I.D.: Do they need the range, all they can get?

Madson: Yes.

A.I.D.: Do you think, then, they'll be increasing the numbers of cattle that they run in future years?

Madson: Well, we're going to need all that we can get. Of course, I think we should have built our cities up on some of those areas and left out valleys for agriculture.

A.I.D.: Amen. (Laughter)

Madson: Thing that gripes me here is to see good farm land taken up for cheap houses.

A.I.D.: Yes, me too.

Madson: But you can't do anything about it.

A.I.D.: The certified seed program you mentioned, was this also one of your programs when you were department head?

Madson: That really got started (my memory isn't too clear on that)--I know one of the reasons behind that was--after Briggs had developed some of these disease resistant varieties of cereals--was how to get the seed out to the growers without being contaminated or mixed with other seed--with other varieties which would negate the value of his work.

And so, they set up (Briggs and the extension specialist who was J. Earl Coke, as I said, the Director of Public Resources in Reagan's cabinet) what amounted to a seed certification program. When other crops came along, Parsons was brought to handle this seed certification work, and, of course, that has developed into quite a large project with a great many crops involved. I wasn't personally involved in it, although, it was, of course, initiated by the department while I was head of the department.

Then we had, before that, the California Seed Council, which was set up in the '20's. It was an organization of seedsmen and representatives of the State Department of Agriculture, especially those who dealt in seed matters, and farmers, and representatives from the University at the time, mostly agronomy. I was chairman of that organization for quite a good many years. But that was started before I was chairman of the department. That worked (to some extent) with the seed certification program. It was kind of a liaison, you might say, between the seed industry and growers and regulation officers and regulation personnel and the research work done at the University. I don't know whether that committee is still functioning or not. [It is very much so.--R. Merton Love]

A.I.D.: Before this certified seed program started, I suppose a farmer could buy some seed and not really know what was going to come up?

Madson: That's right. If he bought some seed, it might have the label of the kind that he wanted, but he never was sure about how badly mixed it was with something else, or whether it was actually what he was hoping to get. The seed certification program--what it amounts to, is they start with foundation seed. That's pure seed that's grown--as with the cereals and some of the other crops, the foundation seed is grown here at the University, (small amounts of it) and then that would be distributed to growers to be increased for commercial production. Those fields would have to be inspected, and they still are, before the harvest season to see that they were true to variety and not too many weeds in them, and other things, depending on the seed. And then that goes on the market with the certification tag on it.

Of course, when that was started, the seedsmen objected to the program very much, because they had their own brands that they wanted to sell, and they thought here was a farmer's organization backed by the University that was competing in their business. However, I understand that a lot of them since have come around to see this is not such a bad idea.

A.I.D.: When was it that you got the new building?

Madson: That was in '48.

A.I.D.: So about the time that you got the new building you left the department?

Madson: That's right. Yes, I helped plan the building--planned the office for the head of the department hoping I'd move into (Laughter) and I never did move into it. [A portrait of Professor Madson hangs in Hunt Hall --A.I.D.]

A.I.D.: Did your staff have outside duties like advising?

Madson: To some extent, yes.

A.I.D.: What was your stand on this?

Madson: They didn't do any more than respond to the requests that would come to them for advice or help or something like that. We all had to do that to some extent. That was part of the job.

And, of course, we had meetings during the year with groups of farmers and others who were interested in some field of agronomy. They were quite helpful, keeping up interest. Then, of course, there were other requests. A farm advisor would ask them to come out and talk at certain meetings and participate in field demonstrations. Our department would participate in such activities, and I expect they still do, although now they have more specialists in extension than we had in those days. For example, the extension specialist in agronomy--he's supposed to keep contact with the department and U.S.D.A. and other activities and see that it gets translated to the counties--to the farm advisors. That's his job. So, they're not dependent on the staff as much as they used to be.

A.I.D.: When the staff did consult let's say for--would they consult for a firm, a corporation?

Madson: Not too much.

A.I.D.: So advising was not a source of additional income?

Madson: Oh, no, no.

A.I.D.: How did your department of agronomy interact and relate to U.S.D.A.?

Madson: We worked with them very closely. For years we had U.S.D.A. representatives stationed here. The last one or two worked on cereals, mostly. Coit A. Suneson was the last one. I don't know that they have any here since he left, but we always cooperated very closely with U.S.D.A. I know in my work with forage crops, well, I had very close contact with Washington. If I wanted information or seed of certain plants that I didn't have or couldn't get, they'd get them for me, and things like that. And I'd send them any records that I got out of it or thought they might be interested in. So, we always worked very closely with U.S.D.A., while I was in the department.

A.I.D.: How did you relate to the office of experiment stations?

Madson: The office of experiment stations was interested primarily in the money that the U.S.D.A. was contributing to various projects throughout the country, and they would have their representatives come out every year to review the projects on which these federal funds may have been spent. In California, it wasn't a very difficult problem, because the fund was handled by the University, and most of it here was spent on salaries--easy way to keep track of it.

Now, in some of the southern states federal funds were about all they had to work with, and they had to spend it for supplies and every other darned thing to keep that project going. Some of the fellows said, "You have really got to go through bookkeeping analysis down there just to find out where the money went, what it was spent for. Out here it's easy, they just hand me a list of people they're paying out of federal funds, and that's it." He said, "It's very easy to take care of the projects they're working on, then we come to you fellows and get some information on the projects and how they're progressing and so-forth, and that's about it."

A.I.D.: When you got money from the federal government and worked on these projects as a result of those funds, did the federal government have to approve the projects in advance?

Madson: Yes, they were usually agreed on.

A.I.D.: And that was the office of experiment stations that--

Madson: The project was usually set up between the corresponding office in Washington. For example, Coit Suneson here, he was working on cereal, barley and oats, primarily, and the project, as such was really agreed on between the department here and the cereal office in Washington--the man who did cereal work there, even though it was experiment station funds, it just happened to be a different office.

A.I.D.: Some people some time ago, I think Dean Hunt was one of them, felt that taking industry grants was not the thing to do because it would apparently influence the scientist a little bit. How do you feel about industry grants?

Madson: Well, I think they're very good. Of course, if you take an industry grant, that's granted usually for some particular thing. But you see, the University requires that any research results developed by the University must be public property. It doesn't just go back to the industry. Anyone can have it, so I think that protects the project. We had some industry grants, but not as much as some of the other departments. But I think they're all right.

A.I.D.: Did they just come to you unsolicited or did you go out and beat the bushes a little?

Madson: Well, here was an industry that had some problems and they'd come to us and discuss it. And in the end, since we couldn't justify it in a budget, necessarily, they'd come through with some money to get the work going and support it. And I think that's pretty universal, the way it develops. I don't think anybody really goes out and solicits industry grants. I know we never did.

A.I.D.: Did you ever have one of your faculty members who was going to take a leave of absence to take a job in industry?

Madson: I don't recall I had any staff members who did that. [Note 6]

Oh, that happened, yes. I know one of the leading entomologists at Berkeley quit and took a job with Sunland Sulphur, I think it was, pesticides and things like that. I think he ultimately became president of the company. I remember him telling me one time about all these new pesticides they were getting out: "Ben," he said, "you know we're dealing with a lot of powerful chemicals that we don't know very much about." And that was true. (Laughter) Still true to some extent.

A.I.D.: What about your connection with federal projects like the Soil Conservation Program, any connection?

Madson: As far as soil conservation is concerned, we did work with them, not in any formal set up, but when they started in the '30's, we helped a good deal in recruiting personnel and also I spent some time with the field men in an advisory capacity. As I say, there was no formal set up. All of this was informal.

A.I.D.: And you've already touched on it quite well, but to cover it again, how did the department relate to the University field stations and the University extension service?

Madson: First, take the field stations. As I said before, the field stations originally were attached to some department.

For example, it happened that ever since it started, the Imperial Valley field station, which was one of the larger ones, was the responsibility of the Agronomy Department, although there were other departments that had work going down there. As far as the general administration of the station, its financing and so on, that was the responsibility of the Agronomy Department. The one in Tule Lake was administered by the Truck Crops Department and so on. We didn't have so very many, but we had quite a number. But they were attached to the departments.

A.I.D.: How did your department relate to the agriculture extension service at the University?

Madson: Well, we usually worked quite closely with the extension service. We had, when I left, one, and I don't know whether we had two, extension specialists who were stationed here at Davis and their purpose was to be liaison between the Department of Agronomy and any knowledge coming out of U.S.D.A. and the counties--the extension people in the counties. An informational relationship, you might say. Before we had any extension specialists, we did go out fairly often at the request of some county farm advisor. He had some problem that he would like to have a specialist come out and give him some advice on, whose ever field that problem fell into would go out and spend a day or two with him. So we always worked closely with the extension service.

A.I.D.: We're still talking about the time that you were the chairman of the department and you had some of your own research programs; you were teaching and responsible for teaching and research. While all that was going on, were you on any campus committees?

Madson: Yes. (Laughter) I became known on the campus as the perennial chairman of committees. I was on the campus Building and Development Committee for a good many years, and, I don't remember, there was always some committee assignment or another.

A.I.D.: Well, let's talk about that one. That's a mighty important committee.

Madson: It was and it wasn't, as I look back on it. Because we used to make some recommendations and either the administration or the architects or somebody would overrule us. (Laughter) But, we'd just discuss generally the campus layout and the guilding needs, and things of that kind, and make recommendations. Some of them were followed and some of them weren't. I know we had quite an argument when they got ready to build our building, Hunt Hall, where it should be located. We wanted it over on the other side of the campus where the Home-Ec building is now. We had been housed in an old building on that site.

We visualized we had more background there to work with than we had over on the other side. So that building was kicked around a lot, and then the architects finally decided to put it where it is now because it fitted in with the group building program more than anything else.

A.I.D.: Who got new buildings? Did it take a good deal of aggressiveness on the part of the department head?

Madson: Of course it always took pressure, but what they did, (and I expect it was right) they would try to set up one department, say this year, if that was all the money they had; they would try to get the building and set up this particular department in good shape. And then next year another department would get it. And so that's the way it worked out. [Note 7]

A.I.D.: Did you have anything to do with the study of costs in the Kern water storage district?

Madson: I did serve on a committee appointed by the Department of Water Resources to make some studies and recommendations on the water in the Kern district, and especially on the storage of ground water. However, that was a very minor study. If I recall, there were five of us on that committee.

A.I.D.: So, back about 1948 you made a suggestion to Dean Hutchison and he took you up on it.

Madson: That's when I talked out of turn and complained to the Dean--because our department was getting to be pretty good size by that time, this was in early '48--I said, "It's impossible for a man to administer a major department at Davis (or anywhere else) and also be responsible for a field station five hundred miles away. He can't spend enough time there to do justice to it."

He said, "Well, what do you suggest?" I said, "I would suggest that instead of having the stations attached to some department, you appoint a director of field stations under a separate budget, so that you'd have one man and that would be his job--to administer those stations." And that's the way that came about.

A.I.D.: This was Dean Hutchison?

Madson: Yes. He thought it over and a few days later he came into my office early one morning and said, "I think that suggestion of yours was good, and I wish you'd be Director of Field Stations."

So I said, "I shouldn't be, I'm too damned old to travel." "Oh, no," he said, "you're not!" So that is the way I became Director of Field Stations.

A.I.D.: And you left the department you'd been chairman of for twenty-one years, you left a building that you'd been responsible for before you got into it, and you took over this new assignment as Director of Field Stations. First of all, what is your opinion about anyone holding the chairmanship of an important department for twenty-one years. Is it good or bad?

Madson: Too long, too long.

A.I.D.: Why?

Madson: The man in the chairmanship job of a department like Agronomy or Horticulture or these larger departments, he loses a lot of his personal contact with the research field, and if you're in there too long, you can't go back to it with any degree of success. I think a change of point of view, even in the chairmanship, is a good idea every once in a while. I don't think a man should be chairman of a department for any more than seven years. That would be enough.

A.I.D.: When you took over as director of the field stations in 1948, what conditions did you find? Who did you succeed, first of all?

Madson: I didn't succeed anybody because there hadn't been anybody. As I said, up to that time, each station had been under the direction of some department.

A.I.D.: What stations were there? What stations did you take over?

Madson: There weren't very many. I took over Imperial Valley, Tule Lake, one at San Jose, and Antelope Valley. I think those were the ones. Then, of course, about the same time we added the Hopland Field Station. [Note 8]

A.I.D.: What became the function of the director? What did you do and how did you coordinate these research programs?

Madson: We set up a budget. Well, take the Imperial Valley Station as an example. For the general operation maintenance of the station and then the departments, if they had a particular experimental project that they wanted carried on at this station, the debt would provide the general field work, like preparing land and irrigation and all that. If there was any special cost, the department had to supply that themselves. If they had to have a special man down there, that was up to them. If it was just something that we could take care of without too much effort, we did it out of the station budget that the departments really had control of the research work at the station within the limitations of their budget and our budget. Of course, that always created a problem because some departments would like to have you finance all their research at the stations.

A.I.D.: Who worked for you--take a station for example. How many people in that station reported to you?

Madson: There was always the superintendent of the station, and the full-time employees at the station, tractor operators, laborers, etc. But the superintendent of the station reported directly to me.

A.I.D.: And the others reported directly to the departments, if they had special research men there?

Madson: In some cases, where they had a job that required someone there the full year, that man, or that position with expenses might be put on the field station budget, but if it was a job that only required part time, a man stationed at the station to take care of a particular experiment, that was the responsibility of the department.

Those details had to be worked out individually with the department.

A.I.D.: Well, now, if this man and his job became part of your budget, did you have any say in that research project or who the man was? Or you just paid for it?

Madson: Oh, we had an agreement on that.

A.I.D.: You didn't hire the man, he was from the department?

Madson: Yes.

A.I.D.: So you just hired the superintendent of each station?

Madson: Yes, the superintendent and the employees.

A.I.D.: You wanted a good general man rather than a scientist?

Madson: Yes. And well, I don't know how many Ph.D.'s they've got at the field stations. I know some of them aren't. They have B.S. degrees, but they're good general agronomists and can handle the personnel pretty well.

A.I.D.: Do you recall some of the men you hired as superintendents?

Madson: Yes, well I hired George Worker who is superintendent at the Imperial Valley field station. I hired the man who was superintendent of the Antelope Valley field station; however, that station has been closed. I hired the man who is still superintendent of the Hopland field station.

A.I.D.: What is his name, do you remember?

Madson: Al Murphy. I didn't hire the man at Tule Lake, I inherited him. I had a hell of a time getting rid of him, and Myler did after I quit. He wasn't much of a superintendent.

A.I.D.: And you hired Myler?

Madson: Yes, he was my assistant. He was Assistant Director of Field Stations.

A.I.D.: And he started as your assistant the day you started as director?

Madson: No, he started a couple of years later.

A.I.D.: Did you have any assistant the first couple of years?

Madson: No.

A.I.D.: Bet you were glad to get him, then.

Madson: Oh, yes. He worked out very well. He is a wonderful guy.

A.I.D.: So hiring then wasn't really too big a part of your job.

Madson: No, I left the hiring of employees to the Superintendent of the station mostly.

A.I.D.: When a farmer needed help and he went to the station he talked to the Superintendent, then?

Madson: Yes, or to the specialist or whoever was working at the station. At Imperial Valley and at Hopland and other stations, we usually have a field day at least once a year in which we invite the public to go over the experimental work that's going on there. We usually get representatives from the college here, from the departments that have worked down there on those days and taken part in the program.

A.I.D.: How much travel time did you have? How did you divide it between the stations?

Madson: I travelled about fifty percent of my time. I tried to visit the stations every couple of months; of course, sometimes it would be oftener. If the superintendent had some problems he wanted to go over with me, I'd make a special trip.

A.I.D.: Was there any thought on the part of anybody that the farmers in encouraging the University to set up field stations--now I understand (and you can tell me if this is accurate) that in come cases they would get together and buy some land and present it to the University. Was there any thought in anybody's mind that this kind of support on the part of the farmers to the field stations might dilute the support of the farmers to the University, itself?

Madson: No, I don't think so. I was trying to think if the farmers actually did that. The rice growers bought some of the land that is now the rice station at Biggs.

And when the Imperial Valley station was started I think (I'm not sure whether it was the county or the farmers there that bought ten acres as a start) and then the University acquired the rest that made up the station. But in most stations the farmers did not contribute in that way. The rice station and the Imperial Valley are the only two I can think of right now. I know the Hopland station was purchased outright. I think the San Jose station was purchased outright. But, we did have a station in the Antelope Valley which was closed later. The ranchers donated the land with the understanding that it would revert to them if the station was ever closed. So that station has been closed, I understand, and I expect that the land went back to the original owners.

A.I.D.: Now would you clear up something for me? I don't get the real connection between the field stations and the agriculture experiment station.

Madson: Well, the agriculture experiment station is the overall coordinator of the experimental work, and the field stations are a part of the agriculture experiment station as such. But the agriculture experiment station involves a lot more, so the field stations are still a part of the agriculture experiment station.

A.I.D.: Did you look to the agriculture experiment station director as your immediate superior?

Madson: I expect I should, but there really was never any direct direction from the agriculture experiment director.

A.I.D.: So it was just kind of a paper connection rather than--

Madson: Now, strictly experimental agriculture projects did go to the director of the experiment station for coordination and approval. Coordination particularly if the same type of work was being done or contemplated at different locations, like at Riverside or Berkeley, Los Angeles, or Davis, wherever that type of thing was being done. One of his objectives was to see that those projects, if they were similar, were coordinated.

Now, when you come to the field stations, you see the departments are really responsible for the research work on those stations, and they were projects which had cleared through the experiment station director so that we didn't have any say about that. Our work as far as the field station was concerned was pretty much administrative and trying to keep harmony between the different departments that had projects going on.

A.I.D.: When you were chairman of the Agronomy Department, you had work being done at a field station?

Madson: Oh yes. When I was chairman of the Agronomy Department we didn't have a field station director. Each station was under the supervision of some department. For instance, Agronomy had the Imperial Valley station (called Melloland). The Truck Crops Department had the one at Tule Lake. One of the departments in Berkeley had the one at San Jose. It was after I became Director of Field Stations we got the one at Antelope Valley which has since been closed. Then we had cooperative work with the U.S.D.A. Cotton Station at Shafter. The Hopland Range station was under my supervision. And then we had some outlying range experiments which also happened to fall into my jurisdiction mainly because I had worked on the range problems so much and probably knew more about them than anyone else. They just left those in my hands even though they weren't actually field stations at that time. Now, since then, of course, they've developed more stations. The station at Santa Ana, the southern field station, we were just developing when I retired.

A.I.D.: So you worked on the development of that.

Madson: Yes, I did some work on the development of that station. The West Side station wasn't even thought of, and that's been developed intirely under Myler's supervision. And there's also one down on the east side there. I don't know what they call that now.

A.I.D.: Was Paul Sharp the director of the agriculture experiment station when you were director of the field station?

Madson: Yes. I don't know whether he left before I retired or not, but he left soon thereafter.

A.I.D.: Can you recall something about the research that you were doing as chairman of the Agronomy Department at Imperial Valley field station?

Madson: Down there it was mostly in the nature of empirical experiments, trying out varieties and various crops to find those that would do best down there, and, of course, the truck crops had the same kind of a setup. And then they had some truck crops nutritional experiments. Ours were mostly with field crops and forage crops to see if we could find something that would do better there.

Then, in cooperation with the soils we did some alkali reclamation work.

A.I.D.: I read that the superintendent of that field station thought of the idea of planting a batch of winter flax every month. The flax that he planted in October-November had good yields, but not any other time of the year.

Madson: Of course, we had that type of experiment with other crops, too. Get the best time to plant and how to plant and when to plant and all that.

A.I.D.: I know that this would be an irrigation water kind of question but I am curious. Were they ever able to figure out how to eliminate some of the alkali that was insoluble in water and replace it with an alkali that was soluble?

Madson: Well, of course, it's all more or less soluble in suspension. Then, you see, now the Colorado River water carries a lot of alkali salts, in fact nearly a ton to the acre foot, and as you use that the plants take out the water and they leave the alkali salts, so they'll accumulate to the point where you just can't grow anything. So, every so often down there now, they take the land out of production for a year and just irrigate it heavily to wash out that salt.

A.I.D.: They use the same water?

Madson: That's the only thing they've got to use, but they've reduced enough that they can use the land again.

A.I.D.: Do you think research will ever find an answer, through chemistry, maybe?

Madson: I don't know how they could.

A.I.D.: Can't turn salt to sugar? (Laughter) I think you said that at the field station they hold a field day once a year?

Madson: At least once a year.

A.I.D.: Now, doesn't the agricultural extension service also hold field days?

Madson: Yes, any field days at the station usually involves the extension service in that county particularly and sometimes other counties. These field days give the ranchers who are interested an opportunity to come in and see what is actually being done. They have these specialists there going over the various projects.

A.I.D.: Is once a year often enough?

Madson: Well, sometimes more than once a year. Sometimes they have specialty meetings. For instance, at Imperial Valley we have a field day in the spring, usually, but the livestock people may have a special day or the truck crops people may have a special day--when their crops are at a stage when they have something special to show.

A.I.D.: Would this be reasonably accurate--that the field stations carry on more of the empirical research with most of the basic research being done at Davis?

Madson: There is, of course, some basic research being done at some of the stations like at Hopland, the Imperial Valley, and the Westside station. The work at the other stations is mainly empirical.

A.I.D.: Now, you were also active in civic ways, very active. While all of this was going on were you on the Davis City Council at that time?

Madson: Yes. I went on the council in '39. Originally, I was appointed to fill a vacancy. I was on the council nine years. I resigned in 1948 and then later in the late '50's (I think) I was elected and served for about a year and a half.

A.I.D.: And you became Mayor of Davis. What year did you become Mayor?

Madson: '47 and part of '48.

A.I.D.: How were you able to do all of this? What was your philosophy of community service? You were a bridge, really, between the University and the town.

Madson: Well, I don't know. I just did it. I enjoyed it. Of course, we didn't have the problems that the city faces now.

A.I.D.: You didn't know it then. At that time you didn't know what they have now. It probably seemed like problems at the time.

Madson: Yes, but we really didn't have many problems. We didn't have so many pressure groups down our backs as they have now.

A.I.D.: Well, you must have been involved in a few controversies.

Madson: Oh, yes, a few.

A.I.D.: Which ones were they? When the Hunt people wanted to come in?

Madson: That was later. I was not on the Council at that time. I don't recall that we had any real serious problems when I was on the Council. There were always people who were in there who objected to something or wanted something done, but after you'd been there a little while you found (at that time at least) there were relatively few people who had any real gripes, and it was always the same person who came back with something different each time: who had a chip on their shoulder.

A.I.D.: When did Hunts come into Davis?

Madson: I think that must have been in the late '50's. The proposal of Hunts to build a cannery in Davis developed a lot of controversy. A number of people were violently opposed to the building of a cannery in Davis. Another group argued strongly in favor of the cannery. Finally, the City Council actually appointed a committee to study the whole thing and its impact on the city. I was chairman of that committee and on that committee was the late Ira Smith who was Business Manager of the University at Davis at the time; Professor Harry Walker of the Ag-Engineering; Dewey Holden who was in the high school at the time (he still lives here and is retired) and the late Ernest Hartz, owner of the Ford Motor Company.

We worked on this quite a while and we got out a report--on the impact as we saw it, both costs and income with respect to the city.

A.I.D.: In support?

Madson: Yes.

A.I.D.: Were all the members of the committee in support? Smith and Walker and so on?

Madson: Yes.

A.I.D.: What were the objections?

Madson: Well, they were rather nebulous, but they visualized that if you start a cannery here you bring in a lot of undesirable seasonal labor, which, of course, isn't true because that isn't done anymore. You don't have seasonal workers in canneries anymore. You recruit help from the surrounding community entirely. In fact, we had a fellow from some office in Sacramento that deals with these cannery labor problems. He said that transient labor was entirely out now in all parts of the state. What with modern transportation you didn't have to provide slum housing or anything.

And then there were other nebulous objections. The interesting thing was that as soon as Hunts actually got started, some of the families of the people who had objected most strenuously got a job out there. (Laughter) It came up for a vote in the spring elections.

A.I.D.: Was there a concern on the part of these objectors regarding the waste disposal facilities?

Madson: Yes, that was part of it.

A.I.D.: How was that resolved?

Madson: Of course, we didn't have the sewage facilities to take care of the cannery waste but Hunts actually put up one hundred thousand dollars to extend the facilities with the understanding (and I forget--it goes back years now) but I think it was twenty thousand right off each year for five years or maybe it was ten thousand for ten years. I don't remember.

A.I.D.: So they have separate facilities out there?

Madson: It's operated as part of the city system. The city operated it, but they had their own facilities and they put up the money to construct it.

A.I.D.: How much water do they need?

Madson: I can't tell you now, but they have quite a bit of water.

A.I.D.: Was there any agreement they had regarding their use of water, or did they have unrestricted right to it?

Madson: There was a limit to how much they could actually use in a given length of time, yes.

The money they put up for sewage expansion of facilities there was actually that needed to take care of the cannery waste. The regular human sewage went into the regular sewage system for the city, so that wasn't involved; it was just the cannery waste. That was one of the battling points because in some cities (and that was true in part in Stockton) they didn't have very good control over the stuff that the canners were putting into the system. That was just a matter of control, however, of screening out the coarser materials. It was pretty much a matter of management. We haven't had any trouble with it.

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Madson, President, Davis Chamber of Commerce, 1964; Warren Blodgett on right, outgoing president

A.I.D.: When did you decide to run for state senate?

Madson: Oh, let's forget that episode. I'd better not say anything about that.

A.I.D.: When did you first get active in the Chamber of Commerce?

Madson: Well, I was never very active until I was elected president.

A.I.D.: 1955?

Madson: '55, yes. I think I had been on the board of directors before that, although I don't exactly recall. The board of directors usually wanted a committee to try to find someone who was willing to be president of the Chamber of Commerce. They came to me and, I guess in a moment of weakness, I said, "Yes."

In '55 the Chamber wasn't very active. In fact, they didn't have any money. Their dues were very low, and we didn't have an office, and we'd have our monthly meetings or so and discuss problems of the city, but not really much (as I look back on it) was accomplished in those times. Then, the second time, in '64, it was pretty much the same thing, but they had in the meantime improved their financial setup a little and had hired a secretary, Mr. Derald Gibson, so things had progressed to some extent, and it was only about that time that the Chamber really got going on worthwhile activities, as I see it. Of course, much has developed since, much better. I think when I first went in the dues were only about five or ten dollars a month--something like that. You didn't get enough money to more than pay postage for answering inquiries and things of that kind.

A.I.D.: Had there been other University people active in the Chamber before you?

Madson: I know Roy Bainer was.

A.I.D.: Was he president?

Madson: I think he is a past president.

A.I.D.: Was Harry Walker a past president?

Madson: I think so, as was W. W. Robbins.

A.I.D.: So you had some pretty good examples.

Madson: Oh, yes.

A.I.D.: I understand that you were very successful in getting support from businesses to the Chamber. I learned also you are one of only two honorary members of the Chamber.

Madson: I don't think, when I was president the first time, we made much progress.

A.I.D.: Do you recall any particular progress you made with the local banks?

Madson: No. I can't recall much that we really did in those days because, as I say, we had no financing to amount to anything. But, then, in the interim after '55 until I was president again in '64, they had made quite a bit of progress, and they had an active committee (I don't remember who was president during that period), but they had really worked over their dues structure and really put the Chamber on its feet.

And when they got enough money to employ a secretary and really get the ball rolling. That happened before I went back to the Chamber. So that was a going function.

A.I.D.: You served as secretary one year, didn't you?

Madson: Well, after a fashion. As I say, that was before we had any money. Hughes (the Buick dealer) was president, and he complained one day, saying, "I get these inquiries and things, and I don't know what to do about them." He said, "I haven't got time to look them up." Well, I had retired by that time and I said, "Turn them over to me and I'll see what I can do about them." So I was secretary without official status or pay. (Laughter) But all I did was answer inquiries--letters for information.

A.I.D.: Which is an important part of the job of secretary even today.

Madson: Yes, but they have a lot more of it today than we had then.

A.I.D.: When did you become director of the Central California Savings and Loan?

Madson: In '54.

A.I.D.: What brought that about?

Madson: That was when they opened the Davis branch of Central California Savings and Loan, and Don Anderson was already a director and vice-president, but they wanted some one else from Davis to be on the board of directors. I knew Wendell Robie, he's the president of the organization, and, of course, I knew Don Anderson, and I'd just retired, so they picked on me.

A.I.D.: You were called in on the Stockton, California, waste disposal system as an advisor?

Madson: That came about because we had had some of those problems here when Hunts came in, and although I wasn't too closely involved with that phase of it, the man who was city manager when Hunts started in here had worked with our council and with me on these problems here. They had a problem over there that he asked me to come over and look into it.

Their problem wasn't one that I could really do very much about. Their main problem was that they had, with several canneries, more waste than they had facilities to take care of. So you had to make more or less makeshift arrangements for the cannery sewage. From my point of view there, they were more interested in getting from me my recommendation on what I thought might be in that sewage that might be destructive or injurious if they used it as irrigation water on alfalfa. That was about the extent of my work on that.

Their big problem was that they didn't have the facilities to take care of it.

A.I.D.: Would it have been injurious to alfalfa?

Madson: Not particularly, not unless you use too much of it because their main problem was where they could get it on alfalfa, the soil was fairly shallow and the water table already close to the surface so you had to be careful how much you put on. Now how they finally worked it out and what they did, I don't know. I didn't keep in touch with it.

A.I.D.: From your experience, active as you have been on both Chamber of Commerce as president, and City Council, Mayor, what is your overall impression of these activities for a University professor?

Madson: I think in a community like ours, where the University is such an important part of the community, that it's absolutely necessary for the close cooperation and close contact between University personnel and the city--city officials, Chamber of Commerce, and others--I think they should take an active part.

A.I.D.: You had a number of honors in your lifetime and I am sure they were rewarding. One that struck my eye: you were awarded the Order of the Golden Fleece by the Wool Growers Association at the 104th annual convention. Why would an agronomist be given that award?

Madson: Because of the range activities.

A.I.D.: Had you had much contact with sheep growers?

Madson: Oh yes, I did have in connection with the range work. I had awards of honor from various organizations that I'd worked with--certificates of appreciation or whatever you want to call it. The California Seedsmen Association and others.

A.I.D.: Was that for the certified seed program or other activity with seeding?

Madson: I think it came out after the certification program was in effect. That was pretty much in connection with early activities in the California Seed Council. The honor I appreciated most was the one that I got from the University in '65. I got the honorary degree of LL.D.

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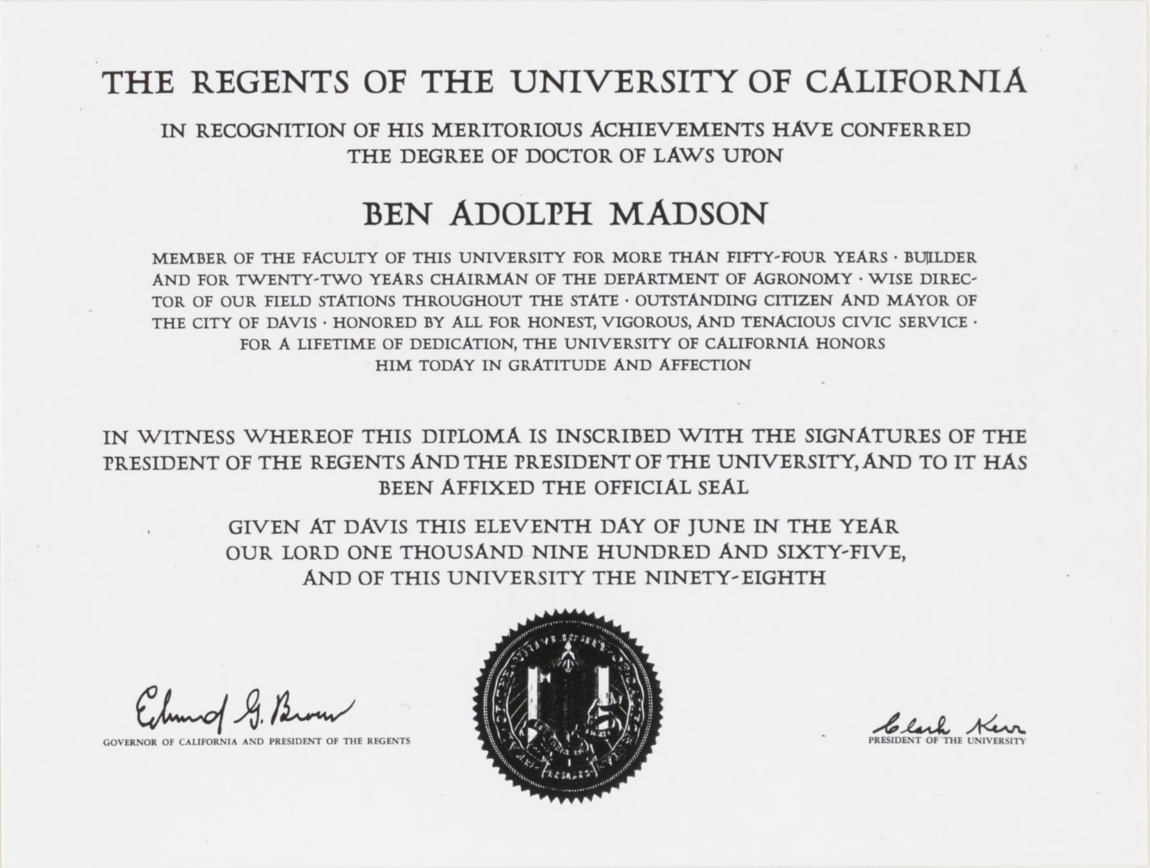

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

IN RECOGNITION OF HIS MERITORIOUS ACHIEVEMENTS HAVE CONFERRED
THE DEGREE OF DOCTOR OF LAWS UPON

**BEN ADOLPH MADSON**

MEMBER OF THE FACULTY OF THIS UNIVERSITY FOR MORE THAN FIFTY-FOUR YEARS · BUILDER AND FOR TWENTY-TWO YEARS CHAIRMAN OF THE DEPARTMENT OF AGRONOMY · WISE DIRECTOR OF OUR FIELD STATIONS THROUGHOUT THE STATE · OUTSTANDING CITIZEN AND MAYOR OF THE CITY OF DAVIS · HONORED BY ALL FOR HONEST, VIGOROUS, AND TENACIOUS CIVIC SERVICE · FOR A LIFETIME OF DEDICATION, THE UNIVERSITY OF CALIFORNIA HONORS HIM TODAY IN GRATITUDE AND AFFECTION

IN WITNESS WHEREOF THIS DIPLOMA IS INSCRIBED WITH THE SIGNATURES OF THE PRESIDENT OF THE REGENTS AND THE PRESIDENT OF THE UNIVERSITY, AND TO IT HAS BEEN AFFIXED THE OFFICIAL SEAL

GIVEN AT DAVIS THIS ELEVENTH DAY OF JUNE IN THE YEAR
OUR LORD ONE THOUSAND NINE HUNDRED AND SIXTY-FIVE,
AND OF THIS UNIVERSITY THE NINETY-EIGHTH

Edmund G. Brown
GOVERNOR OF CALIFORNIA AND PRESIDENT OF THE REGENTS

Clark Kerr
PRESIDENT OF THE UNIVERSITY

A.I.D.: Right. Who was with you on that occasion?

Madson: Harold Cole got the same degree.

A.I.D.: You were the cover man for the California Monthly which is a Berkeley publication. You are not an alumnus of Cal, but this was a separate series?

Madson: It's a Berkeley publication, but it's really an alumni publication statewide, and in that particular year they were featuring some department each month, and selecting one of the members of that department to represent it, and I guess the agricultural alumni must have selected me. But that's for agriculture. That represents the whole University. Well, I think Dr. Hildebrand, the father of the Hildebrand here, was in chemistry at Berkeley and was very popular, I think he was selected to represent the Chemistry Department. I don't know who the others were because I didn't get the publication.

A.I.D.: In 1952 you were the Covell Trophy award winner. That's presented by the Chamber of Commerce, is it not?

Madson: Yes.

A.I.D.: On what basis is that presented by the Chamber?

Madson: The Covell Trophy was presented to an individual who was interested in civic activities and who had been active in the affairs of the city. There were certain criteria that they had to meet, and they select someone every year. Now, that always used to be presented up to the last couple of years at their Fourth of July celebration. Now, however, the Chamber presents it at some meeting in the wintertime, and it doesn't draw nearly the interest--the public interest and attention--that it did before.

A.I.D.: Was there an acceptance speech?

Madson: Oh, yes.

A.I.D.: Did you keep copies of any of your speeches?

Madson: No, I hardly ever wrote one.

A.I.D.: All ad lib?

Madson: Yes.

A.I.D.: I heard it said that you spoke very well and that you could speak as well without notes as with notes.

Madson: I think better, sometimes. (Laughter)

A.I.D.: How about in class. Did you use notes?

Madson: Oh, I used an outline. You had to. You always had to have some illustrative material to fit in with your lectures.

A.I.D.: What do you think about the corporations in the farming business versus the small farmer?

Madson: Well, I kind of dislike to see it happen. I think the small farmer has a place, but I don't think he can compete with the corporation because the corporations often go into farming with the idea of losing money for tax write-off. It's the best way in the world to get a tax write-off, and that's actually what many of them are doing.

A.I.D.: I read that the Farm Bureau (which apparently represents mostly the big farmers) is opposed to subsidies by the government. Would this be inaccurate?

Madson: I'm not sure you're right on that. Whether they support most of the large farmers. I think that they recognize that in today's farming it takes a lot of capital to farm, and you've got to have a pretty fair sized operation to make it pay. Machinery is expensive, and any kind of farm has fifty thousand dollars invested in equipment. It takes a pretty good sized farm to support that kind of investment.

So, I think that's the Farm Bureau's point of view. Now, of course, the Grange has been fighting particularly for the small family farms. I think it's a losing battle because the capital it takes now to actually own and operate a farm--even if you're a renter you have to have a lot of equipment. A farmer now pays more for a small tractor than all our machinery cost when I was a kid on the farm.

A.I.D.: I would like to get your view on journals. What's the best way to disseminate scientific, agricultural information? First scientific information, then what's the best way to disseminate it to the farmers? And maybe the two are the same, I don't know.

Madson: Not entirely, because most of your research appears first of all in the scientific journals of which--there's quite a number, Journal of Plant Physiology, Journal of Genetics, American Society of Agronomy, American Forestry, Journal of Range Management, and a whole raft of them. Not many of those would be acquired by or be really useful to a farmer. Most of the information that goes to the farm now goes out through the agriculture extension service, and usually in the form of bulletins or leaflets rather than in scientific journals, and they are less technical types of publications that anyone can understand, but giving the results of research.

A.I.D.: Now, these journals that you mentioned. Are they published by the various societies?

Madson: Yes.

A.I.D.: Does the University of California put out any journals as a University?

Madson: Yes, they had one that operated for quite a while called Hilgardia--put out scientific papers of various kinds. It fell by the wayside, though because the association journals were more likely read by scientists interested in a given subject, like Physiology or Soil Science, or some of the other publications. [Hilgardia continues as an active journal --A.I.D.] So the local journals became pretty much defunct. They still publish some, but they're more or less popular kinds of things as in California Agriculture.

HONORS/AWARDS GIVEN TO BEN A. MADSON (Copy):

California Woolgrowers Association
P. O. Box 3103
151 Mission Street
San Francisco, California

William H. Baber, President
E. B. Elgorriage, Vice-President
W.P. Wing, Secretary-Treasurer

August 7, 1964

In recognition and appreciation, Professor Ben A. Madson is hereby presented with a symbolic sheepskin of golden hue which marks his admission to the select and honored membership of the Order of the Golden Fleece.

In recognition of his forty-five years of devoted service as a teacher, researcher and administrator in the field of range management, his leadership as head of the Department of Agronomy at the University of California at Davis followed by directorship of the departments of field stations brought noted advances in the development of new, irrigated and field forage crops. He established the soundness of controlled burning and reseeding as a means of reclaiming vast acreages of brush land to usefulness as a source of forage for the lasting benefit of the California livestock industry.

Signed,

William H. Baber, President

---

Alumni Merit Award

KNOW ALL MEN BY THESE PRESENTS that in recognition of preeminent service in advancing human welfare, the Chicago Alumni Association of Iowa State College confers on Ben A. Madson, the class of '07, the Alumni Merit Award, Ames, Iowa, June 14, 1958

---

Special Award of Merit

To Ben A. Madson, Professor of Agronomy, Emeritus, University of California, in grateful recognition of his outstanding contribution to California agriculture and service to the seed industry. Presented by the California Seed Association in convention assembled at Los Angeles, California, this first day of March, 1956. Signed by the president, Richard Lyng, and the secretary, W. Scott Wilmarth.

Neenah Bond
25% COTTON FIBER

Madson at time of Woolgrowers award, 1956

## APPENDIX A

I feel that Ben Madson's two greatest contributions were his development of a strong, scientifically oriented Department of Agronomy, which is now called the Department of Agronomy and Range Science, and his contributions toward the development of a strong range improvement program in California. The first is well documented in the manuscript.

Although the oral history has outlined Ben's leadership with respect to the Rangeland Utilization Committee of the California Agricultural Experiment Station of the Division of Agricultural Sciences of the University of California and his chairmanship for many years of the Range Improvement Advisory Committee to the State Board of Forestry, I feel the manuscript lacks a strong enough statement with respect to his contributions to the development of a range program in the Department.

In the late 1930's, the McDonald family, which I understand owned large acreages of the Carrizo Plains in San Luis Obispo County, gave a large grant--I think about a third of a million dollars--to the University, for dryland research. The Dean, at that time C.B. Hutchison, discussed with Madson where the emphasis should be placed for the use of this money, and it was decided that the major portion of it should go to the development of a range program. As a result of this grant, I was hired April 1, 1940--get the point, April Fools' Day--and I think for some years my salary came out of this fund because I remember Coit Suneson of the U.S.D.A. stating that when the funds ran out I might be out of a job.

Be that as it may, Burle J. Jones, our lone Extension Agronomist, located at Berkeley, had been working on the typical agronomic crops, in other words, the extension of education in cereal crops for the department. He came to Ben with the suggestion that he go ahead with a strong program directed toward range and irrigated pasture improvement. The Chief--by the way, Ben Madson was called the Chief when I arrived here in 1940 and to my knowledge was the only department chairman in the College of Agriculture ever designated by that term; everybody called him the Chief--the Chief encouraged Burle in this, and as a result, Burle gathered together seeds of grasses and legumes and forbs, which are broadleaf herbacious plants that are not leguminous, from all over the world. He and his wife traveled up and down the state in the spring collecting seeds of native grasses and clovers. He organized a series of adaptation trials, small plots, in practically every county of the state on the farmers' ranches. The names of the owners of these reads like a Who's Who of the livestock industry of California at that time--outstanding cattlemen and sheepmen.

When the United States got into the war, World War II, 1941, the Davis campus was closed to undergraduates, and so we had no teaching duties. As a result, for three years, I think it was '41, '42, and '43, I had an opportunity to travel with Burle Jones for about three months in the spring of each year to every nook and cranny of the state to take notes on the plots that he and the farm advisors had been putting out since 1939. Mr. Madson was intensely interested in our results and encouraged us to go ahead so that in 1945 Jones and Love published the first Agricultural Extension Service Circular on range in California called "Improving California Brush Ranges," Circular 129.

In 1947, just two years later, again with the strong backing and encouragement of the Chief, Love and Jones put out Extension California Agricultural Experiment Station Circular 371. "Improving California Brush Ranges" (1947). It is a tribute to the knowledge of Madson and Jones that the principles put forth in Circular 371 are just as valid now as they were when they were published a quarter of a century ago.

I am sure, of course you can ask Ben, but I felt all along that he was grooming me to take his place on the range picture in California. As a matter of fact, if my memory serves me right, he recommended to the Dean on his retirement that I replace him as chairman of the Rangeland Utilization Committee of the University and that I be named as one of the University representatives to the Range Improvement Advisory Committee of the State Board of Forestry.

I took over both of these onerous duties. This committee at that time, incidentally, was a large committee consisting of representatives of the Farm Bureau, the California Cattlemen's Association, the University of

California Agricultural Experiment Station and representatives from the several agencies involved in brush ranges and forestry and wildlands, for example, the U.S. Forest Service. [Appendix B, page 99]. This committee elected its own chairman annually and all the time Madson served he was reelected chairman annually. The same was true for me during the years that I served on it. It has recently been markedly changed and the membership very much reduced.

Ben Madson was a great help to Professor H. H. Biswell of the School of Forestry who agreed with Ben, George Hart, F. J. Veihmeyer and T.I. Storer that the only way to reduce the toll of wildfires in the state of California was to reduce the wildfire hazard, which meant reduction of the amount of debris. This applied to forests as well as ranges. And Biswell had started a program--of all things--of burning in the forests: burning debris, doing it very cautiously to be sure, and conducting it as a part of his research program. This got not only the outside foresters but the men in the School of Forestry up in arms. But with the strong support of the "Giants" as I call them, Madson, Veihmeyer, Hart and Storer, he was kept on the job and it has really paid off. As a result, and I think we must say it stems back to the strong work of Madson and the men that he supported over the years, the National Parks in California are now carrying on prescribed burning to reduce the amount of fuel on the ground and the U.S. Forest Service in Region 5 is even conducting so-called controlled burns in the National Forests as a means of fire prevention.

A notable eight year program of brush range improvement investigations was carried out under the direction of Ben Madson while he was Director of Field Stations. It was called the Range Improvement Demonstration Project and it went on from 1950 to 1959. It was carried out under Madson's direction first and then by his successor, J.L. Myler. The men involved in this were Myler, J.E. Street and B.L. Kay (both forestry graduates), and Charles Walker. Street came from Montana and Kay from University of California, Berkeley, School of Forestry. Walker was an agronomy graduate. To further the program of brush range improvement, a number of range improvement projects was set up to demonstrate and observe the feasibility of converting brush areas to usable ranges.

Before work was done on each site, a survey and general plot plan were made showing the size and shape of the area, main topographical features, the kinds of brush and other types of vegetation, location and the extent of each, and any other information deemed advisable in developing a plan of procedure. Careful records were kept of the cost incurred in the clearing and development of the range, plant succession of the various areas represented by the different cover types, number of animals and time of grazing. Several photographic stations were established on each range. Cooperation of the Extension Range Specialists, local ranchers, farm advisors, the Division of Forestry and the U.S.D.A. Forest Service personnel was excellent.

Advice and counsel was sought from several departments of the University and especially the School of Forestry, UCB (H.H. Biswell), Department of Agronomy and Range Science (R.M. Love), Department of Botany (W.A. Harvey and O.A. Leonard). Progress reports were mimeographed and distributed annually. Five brush range improvement demonstration ranges were studied--the Wagner Ranch, Humboldt County; the Massey Ranch in the Cleveland National Forest, San Diego County; Manley Ranch, Tulare County; Aldrich Ranch, Shasta County and the Flournoy Ranch, Modoc County. These were representative of a variety of conditions found in California. I'll just say a brief word about each.

The Wagner Ranch in Humboldt County consisted of 2900 acres about five miles west of Garberville in the Eel Watershed. Douglas Fir was the main lumber species. In 1950 the vegetation occurred as grassland or glade timber and brush areas which once grew timber. But most of the area was rather densely covered with blue blossom, coast whitethorn, madrone, tan oak, blueberry, poinson oak, and bracken fern. Elevation ranged from 500 to 1500 feet and the annual rainfall from 30 to over 100 inches. The ranch had carried about 200 ewes yearlong for several years. It was hit by wildfire about 1920. In general, the results of the controlled burning were disappointing for two reasons--lack of effective burns because of humid conditions and lack of effective means of sprout control. But the 58 acres of burned tan oak and madrone produced 12 animal unit months of grazing during the summer and fall of 1947 where no grazing had been possible before. The improvement of the open areas was outstanding. The fertilized grasslands and seeded subclover (1954) increased markedly the amount of dry matter as well as the protein content of the dry matter.

Massey Lease in the Cleveland National Forest, San Diego County, located east of Alpine (2500 to 3000 feet) was initiated following the 64,000 acre Canejo wildfire of 1950. I won't go into great detail here, but while the average rainfall is supposed to be 18 inches, it was 6 to 8 inches each of the last three years of the study. Total inputs, 1950 to 1956, amounted to less than $8,000, and grazing value of almost $15,000 was returned. That was the amount returned during the years of the study and it is still returning animal products, of course. Today, there are hundreds of acres of grassland, from which backfires can be set, where there was once impenetrable brush.

The Manley Ranch is in Tulare County (3,000 to 4,000 feet, average rainfall 35 inches). Brush conversion was limited to the 300 acres that appeared to have the most promise. Over the six years following the burning and seeding to a mixture of grasses and legumes including perennial grasses, 745 animal unit months grazing were obtained during the six years over and above that obtained before the brush range improvement program.

The Aldrich Ranch in Shasta County was part of a 9,000 acre "Blue Mountain" burn. During the period of study 8,000 animal unit months of grazing were obtained compared with 2,000 expected on past performance if no improvement had taken place. The Aldrich Ranch is still a "showplace" of improved range pasture.

Flournoy Ranch in Modoc County was a sagebrush range two miles northeast of Likely at an elevation of about 4500 feet with annual rainfall averaging about 12 inches but varying greatly. The dominant brush was _Artemisia tridentata_ (big sage). This actually was more of an experimental area than a demonstration area. The economic returns were not firm at the time the experiment was closed out. However, the 58 acre pasture of Greenar intermediate wheatgrass planted on the plowed out sagebrush produced 25 animal unit months, or 2.3 acres per animal unit month compared with 10 acres per animal unit month coming from sagebrush range.

The Range Improvement Advisory Committee of the State Board of Forestry under Madson's direction requested James Lowell Myler and V.P. Osterli to draft safety guidelines for controlled burns--at that time Osterli was Extension Range Improvement Specialist and Lowell Myler, of course, was Madson's right hand man, Associate Director of Field Stations. While these safety guidelines have been updated from time to time, they're still essentially those in effect at that time. As a matter of fact, these guides were used by the State Association of County Supervisors for their "Be Fire Safe" program so that, within the counties, ordinances could be developed indicating how people who were building in the brushy areas could help prevent wildfires. Over 2,000,000 acres of brush have been burned by the farmers of California for range improvement purposes. Enabling legislation was passed in 1945.

Madson and Myler, of course, were responsible for the location of the Hopland Field Station south of Ukiah and for the Sierra Foothill Range Field Station.

When I became chairman in 1959, Street, Kay, and Walker were transferred to the Agronomy Department. Street almost immediately transferred to Ag. Extension where he still is. Walker resigned several years ago.

The Klamath Weed problem was one of the main reasons that Al Murphy was hired and located in Humboldt County, the area of greatest infestation of Klamath Weed. Ben recognized, as I did, that if Klamath Weed ever were controlled by a chemical or by any other means, we certainly wanted something better to take its place so that the range would not revert to some other weed.

As a result of Murphy's work up there, he and I published, actually it was Murphy, Love and Berry (L.J. Berry, Extension Specialist in Range), a bulletin, "Improving California Klamath Weed Ranges," California Agricultural Experiment Station Circular 437 in April, 1954. Murphy had a B.S. in Forestry from Oregon State College. It was our idea that he would be the first of several range specialists strategically located around the state.

Bill Brooks was hired about 1948 to do the same thing in the San Joaquin Valley range areas. He transferred to the Agricultural Extension Service in 1949 as Farm Advisor in Mendocino County where he still is. But when Madson moved over to Field Stations, Fred Briggs had other ideas in mind. And when Murphy was appointed Superintendent of the Hopland Field Station, the job was taken away from range work and Briggs hired a man to do sugarbeet research. No replacement for Brooks was hired.

With respect to the Cucamonga Brome and the Soil Conservation Service: actually Cucamonga Brome, while it may have been one of the mountain species, was used primarily as a cover crop in orchards or vineyards in Southern California for soil erosion control on sandy soils, particularly wind erosion. It was very good at reseeding. As Ben said, most of the work was done by the Soil Conservation Service at the Pleasanton Nursery and in their nurseries in Southern California. Ben acted as their advisor. I don't know whether during Ben's time this was true, but later there was a so-called "Memorandum of Understanding" between the Soil Conservation Service of the United States Department of Agriculture and the Department of Agronomy and Range Science outlining the cooperative efforts between the two organizations. I think it was probably initiated during my time here. Annual meetings between the men of the Soil Conservation Service group at Pleasanton and ourselves have been and still are held to allocate the responsibility for the maintenance of foundation seed of forage grasses and legumes, particularly. They also serve as exchanges of general information on agronomic crops.

And I might also add that from the standpoint of the production of certified seeds of various crops, the department is responsible for forage crops too. Frank Parsons, with the help of the Extension Service and the County Agricultural Commissioners, spearheaded meetings for years with the California Seed Association local branches. I remember one year particularly, Milt Miller (Extension Specialist in Agronomy), Frank Parsons, Luther Jones, Fred Briggs and I had a whole series of meetings up and down the state ballyhooing the importance of seed certification for the maintenance of improved germ plasm of agronomic crops. I also worked very closely with a man named John Dahl in San Diego County who was interested in forage improvement. As a matter of fact, some of my breeding plots on _Ehrharta calycina_ (veldtgrass from South Africa), were carried on at the Dahl Ranch, Ramona. In appreciation of our work, John Dahl gave the department a research microscope.

Over the years we had a tremendous amount of cooperation from the Agricultural Engineering Department, especially with respect to harvesting of small-seeded legumes. That was one of the main work programs of Luther Jones when he was brought into the Department from the United States Department of Agriculture. Jones was an entomologist working with the U.S.D.A. in Sacramento in the Bureau of Plant Quarantine, I believe, before he was brought to the department. That was in 1946.

At that time I was working with stipa and had been working with the native bunchgrass for about six years. It was very obnoxious as far as the seed was concerned--it has a very sharp seed with a twisted awn. Some of the selections I had looked much better than the original, so we wanted to get into seed production. I remember Madson giving me $1,000 as part of my budget one year to get Ag Engineering started on developing a harvester for this particular species. I remember going to Roy Bainer and letting him know that I had this $1,000 and asking him what he could do for me, how he could get started on this thing, and he says, "Well," he says, "with $1,000 I guess I could give you a tube to suck on." So Ag Engineering didn't do any work on the stipa harvester. We ended up using a hammer mill going very slowly which broke off the awns and ground them up but didn't damage the seeds. Dorm Sumner did this work. (Sumner worked with me as my right hand man and, after having served in the armed forces during the war, came back after the war again to work with me. He now works with Dr. C.A. Raguse). But the work that Luther Jones did with Ag Engineering was quite fantastic in putting a lot more seed of the small-seeded legume into the bag instead of blowing it out over the tail of the harvester.

It was in 1943, I think, or 1944, that an attorney in Sacramento had bought some land near Wilton. He called up Madson and asked what he could plant on some dry land acres he had there that had been farmed to barley for 100 years and had pretty well been farmed out. He had a registered Hereford herd and was mainly interested in irrigated pasture.

Anyway, as a result, Madson suggested that I go over and see him so I did, and that was the beginning of about six years or so of rather intensive work on the Arthur Brown Ranch. It was interesting that when we had our agronomy field days on range over there, we often had more publicity for them in the Sacramento Bee than for the whole department's field day at Davis. This was so partly because Brown happened to be a good personal friend of Hamilton Hintz, who was in charge of the agricultural department of the McClatchy newspaper system. It was just this sort of thing--instead of just advising what to do--working and learning together with the farmer, that was so productive. At least in my case, I admitted we didn't know all the answers, and if the rancher was willing to learn along with us, we could set up some trials over several years and maybe learn something.

And that's how the adaptation of annual legumes was determined for the state of California, spearheaded by the work I did at the Brown Ranch. (Our strain of rose clover is registered as Wilton Rose Clover) As a matter of fact, I have a picture in the Journal of Range Management of Ben Madson and Arthur Brown at one of the field days. That was published in 1952 in an article called "Range Improvement Experiments on the Arthur E. Brown Ranch, California" published in the Journal of Range Management, Volume 3, pages 120-123, the May issue.

R. Merton Love
Professor of Agronomy
UCD

# APPENDIX B

## RANGE IMPROVEMENT ADVISORY COMMITTEE TO THE STATE BOARD OF FORESTRY

### California Farm Bureau Federation:

| | |
|---|---|
| Mr. Robert Hanley | CFBF, 223 Fulton Street, Berkeley 4, California |
| Mr. Orville Z. Comming | Star Route, Ramon, California |
| Mr. William Gover | Anderson, Shasta County, California |
| Mr. George L. Christensen | Modoc County Farm Bureau, Likely, California |
| Mr. Keith R. Manley | Badger, Tulare County, California |

### California Wool Growers Association:

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|---|---|
| Mr. W. P. Wing | CWGA, 151 Mission Street, San Francisco, California |
| Mr. Glen Keithly | Lakeport, California |
| Mr. Lloyd W. Lowrey | Box 23, Rumsey, California |
| Mr. Burle J. Jones | C.M. Volkman Co., 55 Union Street, San Francisco, California |
| Mr. Glenn R. Baker | 214 American Trust Building, San Jose, California |
| Mr. Herbert L. McCabe (Alternate) | Box 66, Upper Lake, California |
| Mr. Chester Linser (Alternate) | Bell Springs, California |

### California Cattlemen's Association:

| | |
|---|---|
| Mr. E. E. Safford | Willits, California |
| Mr. Jim Bardin | P. O.Box 329, Salinas, California |
| Mr. C.J. Tiscornia | San Andreas, California |
| Mr. Freeland Farnsworth | Route 4, Porterville, California |
| Mr. John O'Neal | O'Neals, California |
| Mr. J. Edgar Dick (Alternate) | CCA, Monadnock Building, 681 Market Street, San Francisco, California |

### California Forest Protective Association:

| | |
|---|---|
| Mr. W. R. Schofield | CFPA, Monadnock Building, 681 Market Street, San Francisco, California |

### San Joaquin District Range Improvement Committee:

| | |
|---|---|
| Woody VanFleet | Tollhouse, Fresno County, California |

Range Land Utilization Committee of the College of Agriculture

| | |
|---|---|
| Dr. H. H. Biswell | School of Forestry, Berkeley, California |
| Dr. F. J. Veihmeyer | Division of Irrigation, Davis |
| Dr. R. Merton Love | Division of Agronomy, Davis |

U.S. Forest Service

| | |
|---|---|
| Mr. Clare M. Hendee | Regional Forester, 630 Sansome Street<br>San Francisco, California |

Bureau of Land Management:

| | |
|---|---|
| Mr. G. H. Sharrer | BLM, 630 Sansome Street, San Francisco |

Revised March 15, 1954

Department of Agronomy files
UCD

## APPENDIX C B. A. MADSON/PARTIAL BIBLIOGRAPHY

L.G. Michael, W.J. Kennedy, B.A. Madson, E.T. Robbin and Stella Hartzell.
Influence of stock foods on the digestibility of a corn ration fed to swine. Iowa Exp. Sta. Bul. No. 113 (1910).

B.A. Madson
A comparison of annual cropping, biennial cropping, and green manure on the yeld of wheat. Calif. Exp. Sta. Bul. No. 270 (1916).

B.A. Madson and P.B. Kennedy
Sudan grass. Calif. Exp. Sta. Bul. No. 277 (1917).

B.A. Madson
Grain Sorghum. Calif. Exp. Sta. Bul. No. 278 (1917)
Sweet Sorghum for Forage. Calif. Exp. Sta. Bul. No. 293 (1918).
Our Diminishing Grain Yields-Better Cultivation.
Orchard and Farm, Vol. 32, No. 9. pp. 14,55. Sept. 1920.
Our Diminishing Grain Yields-Fallow vs Crop Rotation
Orchard and Farm, Vol. 32, No. 11, pp. 6,39. Dec. 1920.
Our Diminishing Grain Yields-Better Varieties of Small Grain.
Orchard and Farm, Vol. 32, No. 12, pp. 10,39. Dec. 1920.
Growing alfalfa successfully-How to prepare the land for maximum production. Orchard and Farm, Vol. 33, No. 1, pp6,27. Jan. 1921.
Growing alfalfa successfully-Inoculation and soil treatment.
Orchard and Farm, Vol. 33, pp. 4, 35. Feb. 1921.
Alfalfa Varieties-Facts and Fallacies in California Culture.
Orchard and Farm, Vol. 33, No. 4 pp. 6,31. April 1921.
What kind of alfalfa seed shall we grow?
Monthly Bul. Calif. State Dept. of Agri. Vol. Xl, No. 1, pp. 55-58. Jan. 1922.
Darso-New Variety of Sweet Grain Sorghum.
Orchard and Farm, Section of S.F. Examiner, pp.3, June 17, 1923.
Timely Suggestions on making alfalfa hay.
Orchard and Farm, Section of S.F. Examiner, pp. 3, 10 May 13, 1923.

Kennedy, P.B. and B.A. Madson
The Mat Bean (Phaseolus aconitifolius) Bul. 396,pp. 1,33, November 1925.

Madson, B.A.
Alfalfa Production. Calif. Ext. Service Circular 35, 50 pp. (1929).
Alfalfa varieties and seed supply. Calif. Agri. Ext. Circular 28. pp. 1-13

Madson, B.A. and W.S. Ball.
The Control of Weeds. Calif. Agri. Ext. Circ. 54, pp. 1-68.(1931).

Weimer, J. L. and B.A. Madson
Alfalfa diseases in California. Calif. Agri. Exp. Sta.
Cir. 326 (1932).

Madson, B.A. and J. Earl Coke
Ladino Clover. Calif. Agri. Ext. Ser. Cir. 81. 15 pp. (1933).
Alfalfa Production (Revised) Ext. Ser. Cir. 35

Madson, B.A.
Summer cover crops. Farm Bureau Monthly. May, pp. 12-14 (1936)

Madson, B.A. and J.L. Weimer.
Relative resistance to bacterial wilt of certain commercial
and selected lots of alfalfa. Jour. Agric. Res. 52:7 pp. 547-555
April, 1936.

Ball, W.D., A.S. Crafts, B.A. Madson and W.W. Robbins.
Weed control. Calif. Agr. Ext. Serv. Cir. 97. pp. 111
February, 1936.

Madson, B.A.
Growing soybeans in California
Calif. Exp. Sta. Leaflet, pp. 4 (1944).
What shall we grow for feed?
Yolo County, Farm Bureau Monthly. pp. 10.
Cover crops in sugar beet farming. Spreckles Sugar Beet
Bulletin, Vol. 8, No. 3, May-June, p. 15, 18-19 (1944)

Madson, B.A.
Opportunities and Problems in the Production of Ladino Clover
Seed. State of Calif. Dept. of Agr. Bulletin, Vol. XXXIV
No. 1, Jan., Feb., Mar. 1945, pp. 15, 16.

Lemmon, Paul E., A.L. Hafenrichter, and B.A. Madson
Cucamonga Brome. Agr. Exp. Sta. Cir. 401. Nov. 1950.

Madson, B.A.
Winter covercrops. Agr. Exp. Sta. Cir. 174. June, 1951

# NOTES

Note 1.

"The internal instruction of the Department of Agronomy may be divided into four types: 1) Post graduate instruction leading to a master's or doctor's degree, which may be taken at Berkeley, Davis, Riverside, Whittier, El Centro; 2) Undergraduate instruction leading to a bachelor's degree and requiring four years, which may be taken at Berkeley or in part at Berkeley and in part at Davis; 3) University Farm School instruction at Davis for which a certificate is given at the completion of three years work; 4) short course instruction of six weeks at Davis, open to all persons over 18 years of age without academic requirement."

Annual Report: 1913 - 1914

"Arrangements have been completed effective August 1920 whereby regular University students who care to do so can have their entire Junior year at the University Farm...727 Farm School students, 87 University students, 495 Short Course, 88 Teachers Training, Total 1397.

Annual Report: 1919-1920

"Pursuant to a resolution of the Board of Regents passed on January 16, 1921 lower division work has been organized at the Branch of the College of Agriculture at Davis, so that beginning in August 1922, freshmen and sophomores in the College of Agriculture may reside either at Berkeley or Davis.

Hereafter the work in the Farm School will be reorganized as the non-degree curriculum.

A student may now obtain a certificate of graduation from the non-degree curriculum after two years of study."

Annual Report: 1923-1924

"Two year curriculum in agriculture was terminated with the class of 1960."

Department of Agronomy files

Note 2

The first course listed as Agronomy per se was in 1909-10 when a year course in Experimental Agronomy of one unit was offered for students who expected to go into teaching or research.

The only academic appointment made by Shaw was in 1910 when B.A. Madson joined the department. He served continuously from that date until 1948 when he was appointed Director of the University Agricultural Field Stations. He was a versatile and inspiring teacher.

Following Shaw's resignation from the University, J. W. Gilmore was brought to the University as Chairman of Agronomy in 1913. During 1912-13 agronomy became a major in the College of Agriculture at Berkeley with seven undergraduate courses, and provisions for graduate instruction...that same year G. W. Hendry was appointed to take charge of the Department at Davis where a course in field crops was required for graduation from the Farm School Program.

In addition to Hendry, Gilmore brought in R. L. Adams who later transferred to Agricultural Economics, P. B. Kennedy, W. W. Mackie and W. S. Wilkinson who was later replaced by J. P. Conrad.

--Department of Agronomy files

My records show that the Department of Agronomy started in 1904 on the Berkeley campus as the Experimental Agronomy Division with George W. Shaw as head. Incidentally, the first agronomy course was called Experimental Agronomy and was offered in 1909-1910. In 1913 John W. Gilmore was appointed chairman. Then George W. Hendry took charge of the department at Davis. From what I can gather, ours was the second organized department on the Davis campus, then known as University Farm.

--R. Merton Love

Note 3

Men appointed to staff during my tenure as chairman of the department:

R. W. Allard
F. N. Briggs
Luther Jones
Paul Knowles
Horton Laude
R. M. Love
W. W. Mackie
D. Mikkelsen
J. L. Myler
Frank Parsons
Maurice Peterson
Ogden Riddle (for short time only)
Charles Schaller
Francis L. Smith
E. H. Stanford
D. C. Sumner
Paul Zscheile

--Ben Madson

Departmental personnel changes occurring under chairman Ben Madson included:

F. N. Briggs, transferred from U.S.D.A. to department in 1930
F. G. Parsons, 1937, brought in to manage the Seed Certification Program, later included as California Crop Improvement Association
Francis L. Smith, 1931 (beans)
R. M. Love, 1940 (range improvement)
E. H. Stanford, 1941 (flax breeding, later alfalfa research)
F. P. Zscheile, 1946 (biochemist)
D. C. Sumner, 1946 (seed production of grasses)
Luther Jones, 1946 (Hay and small seeded legume seed production)
R. W. Allard, 1946 (lima bean breeding)
H. M. Laude, 1946 (physiology of range plants)
P. F. Knowles, 1947 (cereal breeder)
A. H. Murphy, 1946 (range research, later superintendent, Hopland Field Station)

--Department of Agronomy files

Note 4

Governor Earl Warren signed the brush burning law...and a bill... which provided for the Division of Forestry to provide advisory brush burning service and stand by fire fighting protection, issue permits, the issuance of which did not relieve the permittee from exercising diligence to avoid damage to adjoining property.

--California Cattleman
50th Annual Issue, November, 1966

Note 5

Neil Rutgers (Rice)
Ben Beard (Oil Crops)
Marion Davis (Rice)

-- R. Merton Love

Note 6

Ogden Riddle did leave the department, not to go with a big firm, but he and H. A. Hanneson, who had been employed in the department of Botany, both resigned from the University to set up their own consulting organization as sort of private extension agency. They are still in business in Davis.

-- R. Merton Love

Note 7

Hunt Hall is used by several departments, in addition to Agronomy; Truck Crops now called Vegetable Crops, and Plant Pathology. The latter moved to Hutchison Hall a few years ago.

-- R. Merton Love

Note 8

Statewide Agricultural Field Stations

Antelope Valley-1st site, 1949-52; 2nd site, 1953 (Los Angeles County)
Deciduous Fruit-1920's; present tract acquired 1952 (San Jose, Santa Clara County)
Hopland - 1951 (Mendocino County)
Imperial Valley -1912 (Imperial County)
Lindcove Field Station - 1959 (Tulare County)
Sierra Foothill Range - 1960 (Yuba County)
South Coast - 1956 (Orange County)
Tule Lake - 1947 (Modoc County
West Side - 1959 (Fresno County)

Departmental Agricultural Field Stations

Blodgett Experimental Forest - 1933
Howard Forest - 1931
Meadow Valley Field Station - 1955
Napa Experimental Vineyard - 1947
Rice Experiment Station - 1912
Whitacre Forest - 1910
Wolfskill Horticultural Station - 1937
Gill Tract - 1923
Oxford Tract - 1923

--Department of Agronomy files

Note 9

Rangeland Utilization Committee (ca 1954)

B. A. Madson, Chairman
F. S. Baker
H. H. Biswell
R. G. Bressler
H. H. Cole
G. H. Hart
R. M. Love (succeeded Madson as chairman
J. J. McElroy
J. L. Myler (secretary for the committee
T. I. Storer
F. J. Veihmeyer

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Avrom I. Dickman was born in Buffalo, New York in 1910. He received a B. A. degree from Pennsylvania State University in 1932. His wife Harriet is a sculptor and they have two sons. He was employed by Equitable Life Assurance Society from 1932 to 1970 when he retired. At that time he became a volunteer editor in the Oral History Program, University Library, University of California, Davis. He is past president of the Friends of the Library, University of California, San Diego and past president of Library Associates, UCD. He now lives in Davis, California.